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GUIDEBOOK ***for*** ***MASSACHUSETTS*** ***BOARDS of HEALTH***

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Prepared under contract with the Massachusetts Department of Public Health by the staff of the Division of Public Health, School of Health Sciences, University of Massachusetts, Amherst.

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Corrections and suggestions for revisions of the Guide should be sent to the Assistant Commissioner for Community Health Services, Massachusetts Department of Public Health, 600 Washington Street, Boston, MA 02110.

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II. Supplemental Materials and Information
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CHAPTER 1

INTRODUCTION TO THE GUIDE

PURPOSE

As the decade of the 1980s begins, the public has renewed awareness of “noxious influences affecting life and health”¹ posed by contamination of the environment by radiation, organic and inorganic chemicals, acid rain, salt, lead and noise, and by unhealthful personal behavior such as smoking, poor nutritional habits, inadequate exercise, and poor oral hygiene. Local official health agencies have responsibility for protecting their communities from such hazards, as well as from communicable diseases, poor housing conditions and other unsanitary or unsafe conditions. In addition to carrying out state-delegated responsibilities, towns and cities have historically had broad authority to adopt ordinances and by-laws for the “preservation and promotion of the health of their inhabitants as an exercise of the police power.”²

The purpose of this Guide is to provide enough information to allow members of boards of health to understand the scope and content of their duties as authorized under the Commonwealth's General Laws, the Sanitary Code, the Environmental Code, and other relevant laws and regulations. Because of the quantity, technical detail and frequent revisions of many of the statutes and regulations to which boards may need to refer, state and federal statutes and regulations should be checked for changes, for specific and detailed provisions, and for reference to appropriate legal terminology.

The information in the Guide is presented in as non-technical terms as possible. The Guide describes and refers to, but does not attempt to restate or paraphrase, the extensive laws and regulations of state and federal authorities. The board of health will have to consult these directly, and request advice or interpretation from its own town counsel, corporation counsel or city solicitor and from the state regulatory authorities, when it has to deal with specific rule-making or enforcement issues.

Part I of the Guide includes suggestions for boards of health and health officials to help them plan their activities, evaluate programs and functions, broaden objectives, and develop legal, organizational, financial and educational strategies to meet their goals.

Part II deals with specific topics related to environmental sanitation, including both mandated responsibilities and recommended preventive and educational actions. Protocols or descriptions of usual courses of action for solving common problems are included.

Part III covers disease prevention and control programs, reporting requirements and related responsibilities.

Part IV provides an overview of personal health services and health promotion activities, only a few of which boards of health are required by state law to provide, but which many communities consider indispensable to their health and welfare. Appendix I provides a directory of major resources available to boards of health.

The Guide focuses on the legally mandated responsibilities of the local official health agencies in the state, including boards of health, commissioners of health, and those boards of selectmen which retain the powers of local official health agency. References to the General Laws of Massachusetts and to state and federal regulations are included for each duty. The chapters include lists of state and federal agencies to which a local health official may have to refer a problem or from which she/he may obtain additional information.

In addition to outlining local duties, the Guide includes the following: (1) state and federal responsibilities for specific public health problems, as they relate to the functions of the local board of health; (2) summary of suggested local preventive health actions and alternative methods for addressing local health needs and problems; and (3) background information and suggested remedies to assist the board of health in educating itself or the public about the need for board of health activity or concern.

Appendices include technical information, sample forms, samples of local regulations, job descriptions, evaluation forms, and other documents of potential interest to local official health agencies.

COMPANION MATERIALS: MANUAL OF LAWS AND CODE OF MASSACHUSETTS REGULATIONS

To deal with specific problems on the local level, boards of health and their staff must refer to the laws of Massachusetts (the *Manual of Laws Pertaining to Public Health*, 1980, published by Massachusetts Department of Public Health, is the most recent compendium of public health laws) and to the Code of Massachusetts Regulations, referred to in this Guide as "CMR". A compendium of regulations directly of interest to local official health agencies is expected to be published concurrently with this Guide. The major sections of the CMR of interest to local health officials are the Department of Public Health Regulations, identified numerically by the prefix "105CMR", and Department of Environmental Quality Engineering Regulations, identified by the prefix "310CMR".

For current information on statutes and amendments after 1979, refer to the *Massachusetts General Laws, Annotated*, and/or the General Acts and Resolves for each year, available in one or more of the following places: in town clerk's office, town manager or selectmen's offices, police stations, and public libraries. The monthly *Massachusetts Register*, printed by the Office of the State Secretary, contains official reports on adopted regulations, statutes and other actions.

In addition to the state laws and regulations, many towns and cities have local regulations and standards more stringent than state "minimum standards." Case law and legal interpretations by the state attorney general's office may also affect the application of the laws and regulations.

USES OF THE GUIDE

For orientation, new board of health members may find it most helpful to read through Part I, on administration, and then to read, in each subsequent chapter, both the list of "Board of Health Responsibilities" and the "Rationale," in order to understand the scope of authority and responsibility and the reasons for board of health involvement.

For reference, to get an overview of board of health responsibility and reference to major applicable laws and regulations, check the table of contents or index to find the topic of interest. The chapters of the guide summarize board of health duties, but are not intended to substitute for or duplicate the contents of regulations or statutes. References to laws and regulations are provided to facilitate rapid access to the appropriate legal information. On some subjects, additional laws or regulations might be applicable, especially to a particular case. This Guide is intended to provide references to the statutes and regulations that usually apply to a particular problem, rather than to provide exhaustive legal background.

PART I: ADMINISTRATION

CHAPTER 1.

CHAPTER 1. Introduction

Purpose of the Guide

Companion materials:

Manual of Laws and Code of
Massachusetts Regulations

Use of the Guide

CHAPTER 2

LEGAL AUTHORITY AND PROCEDURES

A. SOURCES AND SCOPE OF LEGAL AUTHORITY

In the area of public health, there are three primary repositories of power: the federal government, the state government, and local authorities. Examination of the constitutional basis of power at each level of government helps one understand the role of local official health agencies.

1. The Federal Government

The powers of the federal government are limited to those functions explicitly delegated by the constitution. All other powers are reserved for the states or the people.¹ Although powers delegated to the federal government are limited, the federal regulatory action deriving from the powers to regulate interstate commerce and to levy taxes for the general welfare has considerable impact on state and local health programs and enforcement.²

2. The State Government

In contrast to the defined powers of the federal government, state governments have broad powers. These include "powers to prescribe, within the limits of the state and federal constitutions, reasonable regulations necessary to preserve the public health, safety, and welfare." These powers are commonly referred to as "police powers" and are derived from the nature of state government.³

While there is no specific definition of the states' police powers, the courts have historically found two basic purposes that justify the states' actions with regard to the public health: (1) actions for the protection of a given individual and (2) actions for the protection of society at large. It is a widely accepted function of government to protect the health of society, even at the expense of the individual's freedom.

Although the state government is the primary repository of authority in public health matters, there are constraints on this authority. In some cases, these may be explicit powers granted to the federal government, or prohibited to the states. In other cases, individual rights of citizens as they are expressly enumerated in the federal and state constitutions may take precedence over the state's authority.⁴ In public health, policies such as requiring adequate sewage systems and performing inspections of private dwellings depend on a balance between the individual's right to privacy and the governing agency's overall concern with the health of the individual involved and society at large.

State governments are clearly the primary authority in the field of public health and possess the power to make laws for the public health. This power consists, in part, in being able to delegate authority. It is from this power that state agencies and local boards of health derive their authority.⁵

3. Local Authorities

State and local public health departments and agencies have authority primarily by explicit and specific delegation from the state legislature. This authority includes both the powers that are expressly granted to the local authorities through the general laws of the state and those powers that are necessarily implied from these statutory mandates.⁶

In delegating power, the state legislature places limits on the exercise of that power. In this way the state specifies the manner in which the power is to be exercised and the consequences of failure to exercise, or of improper exercise of, that power.⁷

The extent of the state's delegation of power varies from designating the board of health as the primary enforcement agent of the state's regulations, as in the case with the housing section of the sanitary code, to authorizing the board of health to draft its own regulations regarding public health matters. The only absolute restraint on the board of health's ability to draft regulations, ordinances, or codes is that they must be consistent with state law. In certain cases, statutes specify that local regulations must be approved by a state regulating agency before they may become effective (air pollution, food service, radiation control). Local regulations may be more stringent than existing state mandates, but in no case may they be less stringent. In addition, regulations must be "reasonable" solutions to the problems they address — "reasonableness" may be tested in court.

To effect enforcement of the standards promulgated by the local board and the state, in their respective jurisdictions, the local boards are granted the power to make inspections and examinations, to issue and revoke licenses and permits, and to issue orders to any individual or corporation which is in violation of the regulations or standards.⁸ The local boards are directly responsible for the enforcement of these standards.

Failure of a board of health to enforce the Sanitary Code or the Environmental Code may result in the state re-assuming its power to enforce state laws and regulations.

If it is determined by the Commissioner of Public Health, the Commissioner of the Department of Environmental Quality Engineering or their representative that the local board of health has failed after a reasonable time to enforce the sanitary or environmental code, the MDPH or DEQE may assume enforcement powers to effect compliance with the code. (Chap. I, Sanitary Code, 105 CMR 400.300, and Title 1, Environmental Code 310 CMR M.G.L. 111:3 and 127A.)

The determination by the Commissioner is made in the following manner:

- a. If, as a result of a study, inspection, or survey, the MDPH or DEQE determines that the board of health has not effected compliance with the sanitary or environmental code, MDPH or DEQE will send a notice to the board of health.
- b. The notice gives the board of health a reasonable amount of time to effect compliance, and requests the board to notify the MDPH or DEQE as to what action has been taken to effect compliance with the code.
- c. If the board of health fails to provide this information or if the MDPH or DEQE decides that insufficient action has been taken to effect compliance, it will be deemed that the board of health has failed in its duties, and MDPH or DEQE may assume the board's power to effect compliance.

Certain statutes provide for "coordinate powers" of MDPH with local boards of health (e.g. M.G.L. 111:7, investigation of contagious or infectious disease notice), or "concurrent responsibility and authority" (e.g. M.G.L. 111:198, violation and enforcement of lead poisoning prevention and control statutes).

B. RULE MAKING: PROCEDURES FOR MAKING LOCAL REGULATIONS

Historically, legislation has been a tool for translating knowledge of causes of disease and ill-health into programs for the protection of the public health.

The board of health may determine that regulations are necessary to control the causes or to outline methods of dealing with a public health problem. Local regulations may not be less stringent than state or federal regulations, but may be more stringent. Most state regulations are called "minimum standards," and local boards are authorized to make stricter standards.

The following section is intended to assist the board in drafting regulations. Note that the first step in this process is developing and checking the rationale: the nature, documentation, extent and impact of the problem or need before the board of health proceeds to the rule-making stage. Often health problems or needs can be addressed through the use of existing state law or regulations, making **new** regulations unnecessary.

The process of drafting regulations usually requires collaboration between the board of health and the town counsel or city solicitor. The members of the board generally do not have the legal expertise necessary for the proper drafting of the regulations. Only through mutual effort can effective and constitutionally valid regulations be drafted.

If the town or city employs a health officer, he/she should assume responsibility for defining and documenting the problem and drafting a proposed regulation for presentation to the board. The board must then consider the issues, hold hearings as necessary, and make the final decision.

Guidelines for Drafting Regulation:

- I. Develop Rationale
 - A. Define problem.
 - B. Demonstrate need for additional regulation.
 - C. Gain support of the entire board.
 - D. Hold public meeting or hearing on the problem if desired or if required by general laws regulating the overall activity (e.g. assignment of sanitary landfill site).
- II. Administration and Authority
 - A. Follow conventional numbering system for regulation(s), as defined by general laws or local regulations.
 - B. Indicate the specific sections of the general laws under which the regulations are adopted.
 - C. Specify by what authority the regulations are adopted (M.G.L. 111:31 and other relevant sections of the general laws).
 - D. Indicate the effective date of the regulations.
 - E. Indicate the relationship of the new regulation(s) to any relevant existing regulation(s), including specific provision for regulation(s) to be repealed by acceptance of the new regulation(s).
 - F. Publish the regulations in final form in a local newspaper (This is required by M.G.L. 111:31; even if the authorizing statute does not require it, it is strongly recommended that regulations be published).
 - G. Hold a public hearing if it is deemed necessary or required by law.

III. Content

- A. Title and regulation(s).
- B. Define terms.
- C. Designate individual or agency responsible for enforcement.
- D. Establish standards.
- E. Prescribe duties and procedures.
- F. Describe enforcement and sanctions.
 - 1. Nature of sanctions.
 - 2. Conditions warranting sanctions.
 - 3. Process for applying sanctions.

IV. Style

- A. Be brief.
- B. Express regulations in the present tense.
- C. Use active voice.
- D. Use third person singular to the extent possible.
- E. Follow accepted punctuation form.
 - 1. The meaning of the regulations should not depend solely on the punctuation.
 - 2. If a minor change in punctuation changes the meaning of the regulations, they should be rewritten.

V. Language

- A. Use consistent terminology.
- B. Use clear and consistent definitions that are substantially consonant with traditional meaning (for an example of locally drafted regulations, see Dumpster Regulations of the Town of Winchester in appendix II(2), and Sherbourne Drinking Water Regulations in Drinking Water Regulations in appendix II(10).

Influencing State Adoption of Regulations:

If the board of health wishes to influence or change **state** regulations, or to call attention to a regional problem, it can follow several courses of action: write to, or attend, relevant committees or boards of the regional health planning agency, discuss the issues with the MDPH District Health Officer and other regional officials, write to MDPH, DEQE or other state agencies, and attend, and testify at, hearings held by MDPH or DEQE on proposed regulations. The executive departments of the state government have rules of procedure and rules for adopting administrative regulations (e.g. 310 CMR 2.00, Rules for Adopting Administrative Regulations).

C. ENFORCEMENT AND DUE PROCESS

General:

Local boards of health have the power and responsibility to enforce regulations made under the State Sanitary Code and Environmental Code (M.G.L. 111:127A, 127B, 150A, etc.; Chapter I of the Sanitary Code, and Title 1 of the Environmental Code).

M.G.L. 111:187 specifically authorizes boards of health to apply to the supreme judicial or superior court for enforcement of its orders relative to the public health, and specifies the applicability of M.G.L. 214:11 and 12. Civil jurisdiction and criminal jurisdiction for enforcement of state law and local public health regulations under M.G.L. 111:127A–127K are outlined in M.G.L. 218:19C and 26.

To effect the enforcement of the Sanitary and Environmental Codes, local boards of health are encouraged to exhaust all administrative actions of enforcement before pursuing court action. The following outline suggests guidelines for the enforcement of the Sanitary Code and Environmental Code:

1. Make inspection.
 - a. routine
 - b. upon request or complaint
2. Take photographs of violations if possible and if court action is contemplated, and take samples as necessary (observe procedure if specified in regulation).
3. Serve notice of violation and/or service orders; show statutory or regulatory authority.
4. Specify time for compliance; indicate whether condition is considered by the board to be "emergency."
5. Make reinspection.
6. Issue notice of non-compliance.
7. Arrange hearing.
8. Serve penalty — revoke license or permit, if applicable, after holding any hearings required by law and serving notice adequately.
9. File with district or superior court for a hearing, to see whether complaint should be issued.
10. Proceed with civil or criminal process if court determines that there is cause.

Since court procedures can be expensive, time-consuming and exhausting, especially for a small staff, and courts frequently do not acknowledge the importance of public health hearings, it is important for the board to use the sanctions at its disposal, such as revocation of licenses and permits, where this is possible. When administrative sanctions are not available, such as when a landlord is refusing to remove lead paint from a dwelling, a criminal complaint may be a necessary potent device to obtain compliance.

Purpose of court action: to prove existence of violation, obtain court order for correction and application of fines or other penalties for the violation(s) ultimately to obtain compliance with the law.

Court Processes

Civil proceedings follow the pattern:

1. complaint
2. answer or motion (may be denial of violation)
3. period of "discovery" (may be longer time period than is criminal proceeding)
4. trial
5. execution of judgment: judge sets fine or other penalty, may have to attach property or garnish wages.

Civil proceedings may be an effective method for obtaining compliance when the board of health does not wish to threaten criminal action and when timing is not critical, but a criminal complaint may be much more effective if immediate correction of the violation is needed. An alleged violator may not be affected nearly as strongly by the threat of a nominal fine as by the possibility of having a "criminal record."

In criminal proceedings, the sequence of events is approximately as follows:

1. clerk of court issues summons (upon application by board of health or other applicant).
2. show cause hearing is held to determine whether complaint should issue.
3. court issues complaint, if clerk decides there is cause.

4. defendant answers or files motion to dismiss complaint for lack of cause.
5. if complaint is not dismissed, case proceeds to trial.
6. execution of judgment: judge sets fine, prison term, or other penalty.

Boards of health also have recourse to the courts for other action, such as a petition to establish a rent receivership, to obtain a cease and desist order, to recover expenses incurred in removing a nuisance, or to obtain a search warrant. Persons upon whom the board of health have served an order may appeal or "file a petition for a review of such order in the district court" (M.G.L. 111:125A), as provided in specific statutes. (In this case, the court would "affirm, annul, alter or modify" the board's order.) The statute and regulations describe more fully the alternative enforcement methods available to boards of health.

Emergency Powers

In addition, local boards possess enforcement powers for emergency situations. Regulations 105 CMR 400.200 of Chapter I of the Sanitary Code and 310 CMR 11 (Title I of the Environmental Code) grant local boards the authority, in accordance with the provisions of M.G.L. 111:30, to dispense with ordinary enforcement procedures in the interest of protecting the public health in emergency situations. The board may, without notice or hearing, issue an order citing the existence of the emergency and requiring that such action be taken as the board of health deems necessary.

The agent of the board of health, or director of the health department, is authorized to act for the board in cases of emergency or if they cannot conveniently meet. She/he has all the authority that the board has, but must report emergency actions to the board for approval within two days, and must be directly responsible to and under the control of the board (M.G.L. 111:30).

Community Awareness of Public Health Standards

Frequent campaigns to remind the public at large as well as commercial and industrial establishments about minimum standards for housing, sewage and waste disposal, water, food, and other areas under its jurisdiction may help the board of health reduce its burden of enforcement responsibilities. This public education, combined with regular mandated inspections and constructive approaches to problems (rather than punitive approaches), helps to mobilize community expectations

The board of health needs to establish and maintain its credibility and community visibility. Sending press releases to the local paper on current activities and on local and state regulations affecting seasonal activities (such as community fairs or bake sales, percolation tests, campgrounds and camps, flu immunizations, etc.) may help remind citizens of their responsibilities. Public hearings and notices about landfill or availability of recycling centers, housing conditions, and other problems and concerns will also increase public awareness of the board's function in the town government.

The board of health should be, and the community should expect it to be, the agency that oversees the health of the community and protects the community from preventable hazards to health.

Inspections

Numerous provisions of the General Laws, Chapter I of the Sanitary Code, and Title 1 of the Environmental Code authorize local boards of health to enter and examine at any reasonable time such places as they consider necessary either upon complaint or according to a local plan for systematic, periodic area inspection of dwellings, dwelling units, rooming houses and rooming units, and other premises. Inspections are to be conducted in the manner described in the relevant statutory provision or article of the Sanitary or Environmental Code. (See sections below, subsequent chapters, and cases in appendices for additional information.)

Periodic Area Inspections

Periodic area inspections may serve as preventive measures, conducted to determine whether conditions exist that are deleterious to the health and well-being of the public. While they are intended to reveal areas in violation of health codes, they generally are not conducted when the board is aware of specific violations.

Inspections Upon Request or Complaint

Inspections upon request or complaint involve the examination of premises for specific conditions that may constitute violations of law, and which the board of health may order corrected. If an occupant or owner objects to such an inspection, it is necessary to obtain a warrant in order to conduct the inspection.

Chapter I of the Sanitary Code authorizes local boards of health to obtain a search warrant to conduct an inspection, "if any owner, occupant, or other person refuses, impedes, inhibits, interferes with, restricts or obstructs entry or free access to every part of the structure, operation or premises where inspection authorized by (the) code is sought."⁹ The board should have **substantial** evidence indicating that a search is necessary. If cause for a search is judged to be warranted, officials of the district court, with the help of the board or health officer, will develop an affidavit recommending that the court magistrate issue a search warrant. (M.G.L. 111:5[1]). The warrant apprises the owner, occupant or other person of the nature and justification of the inspection. The board may seek police assistance in presenting the warrant.

If efforts to conduct an inspection are impeded by an owner, occupant, or other person, the board of health may **revoke** or **suspend** any license, permit, or other permission regulated by the board. This power should provide considerable leverage to the board to obtain compliance.

Suggestions for Conducting An Inspection

1. Routine inspections of housing units should take place at a time mutually satisfactory to both the inspector and the owner or occupant of the premises. Catering services, camps, refuse disposal facilities, food manufacturing places need to be inspected at times when they are operating, when possible problems can be observed.
2. The inspector should identify him/herself, show his/her credentials, and state his/her intent to inspect the premises and the nature of the inspection.
3. If entry is refused, the inspector should leave and report the refusal to the board of health for further action, such as approval of obtaining a search warrant for the inspection.
4. At the time of inspection, the inspector must note all violations and complete the appropriate inspection form.
5. If expert assistance is deemed necessary, but not available at the time of the inspection, the inspector should complete the form to the best of his/her ability, indicating areas that require a separate inspection with expert assistance. The board should promptly schedule the expert inspection.
6. At the conclusion of the inspection, the inspector should report all violations to the owner or occupant of the premises, operator of the establishment, or other responsible person as may be specified in statutes and regulations.

ORDERS

Public health officials may issue an order for compliance with the Sanitary or Environmental Code whenever a violation is found. Such an order gives notice to the violator that a violation exists and serves

notice upon him/her to correct it within a specified time. Failure to comply with an order may result in another legally sanctioned procedure such as issuance of an injunction or civil or criminal prosecution.

In enforcing local regulations and the Sanitary and Environmental Codes, local boards have the authority to serve orders on all persons in violation of regulations. Orders are served in the following manner:

- a. personally, by any person authorized to serve civil process, or
- b. by any person authorized to serve civil process, by leaving a copy of the order at the individual's last and usual place of abode, or
- c. by sending the individual a copy of the order by registered or certified mail, return receipt requested, if the individual is within the Commonwealth, or
- d. by posting a copy of the order in a conspicuous place on or about the premises and by advertising it for at least three days out of five consecutive days in one or more newspapers of general circulation within the municipality where the building or premises affected is situated, if the individual's last and usual place of abode is unknown or outside the Commonwealth.

HEARINGS

Boards of health may hold hearings upon their own initiative or upon petition by any party wishing to be heard concerning a public health matter. Usually hearings are requested by people who wish to contest an order issued by the board of health for correction of a violation of state or local regulations. Hearings provide opportunities for individuals to show why an order should be modified or withdrawn. In addition, hearings serve as a forum for the discussion of proposed or existing local or state regulations.

In certain cases specified in statutes or regulations, the board may be required to hold a public hearing before granting a license, before making local regulations, or before revoking a license or permit. A hearing **must** be held before the board grants a variance under the Sanitary or Environmental Code.

Unless it is specifically prohibited by an article of the Sanitary or Environmental Code (in which case an appeals process is outlined), any person or group of persons may request a hearing following an order served on that individual or group by the board of health.

1. The petition must be in writing and received by the board within 7 days after the order was served, unless differently specified by local regulation. If the petition is not received within 7 days, each day's violation of the order is a separate offense.
2. The board must arrange the hearings within 30 days after the order was served and must inform the petitioner of the time and place of the hearing under provisions of the Code.
3. The hearing may be postponed if the petitioner supplies sufficient reason.
4. After the hearing, the board sustains, modifies, or withdraws the order and informs the petitioner of the decision in writing.
5. If the order is sustained or modified, it must be carried out within the time period designated in the original order or in the modification. Each day's failure to comply constitutes a separate offense.
6. The board of health must make every notice, order, and other documentation of the hearing a matter of public record in the office of the town or city clerk, or in the office of the board of health.

Boards of health conduct hearings that are either quasi-judicial, concerning orders, licensure, permits or other matters, or quasi-legislative in nature, involving debate of new or existing local regulations. The following outlines provide suggested practices for each type of hearing.¹⁰



Quasi-Judicial Hearings

1. The hearing officer should be impartial and yet familiar with the particular case and the laws and regulations pertinent to the case. (M.G.L. 30A:11A 1/2)
2. Hearings must be public unless permitted by the open meeting law to be closed according to the procedure outlined in M.G.L. 30A:11A 1/2.
3. The parties involved may be represented by counsel. The counsel may be either a lawyer or a non-lawyer.
4. The names of all parties, counsel and witnesses (and on whose behalf they are appearing) should be included in the hearing records.
5. The health officer should introduce him/herself and direct the hearing by stating the purpose of the hearing and highlighting the main issues of the case.
6. Although agencies need not observe the rules of evidence observed by courts, evidence may be admitted "only if it is the kind of evidence on which reasonable persons are accustomed to rely in the conduct of serious affairs (M.G.L. 30A:11)." Evidence may be taken in any order.
7. The petitioner has the burden of proof and should proceed first.
8. Both parties should be allowed sufficient time to state their cases. Any witness may be cross-examined by either party.
9. In very informal hearings, it may be necessary for the hearing officer to help the party present his/her full case and offer advice as to his/her legal rights.
10. In minor matters the officer may announce the decision immediately. The decision should be immediately noted on the record. In lengthy or complex hearings, it is better to reserve the decision and render a determination in writing with a well-reasoned opinion in support of the decision. The decision must be served on the party and the party's counsel. Decisions may be delivered by mail. Information describing procedures for appeal should be included in the decision.




Quasi-Legislative Hearings

Quasi-legislative hearings are usually held before the time the board of health promulgates rules, regulations, or standards. The participation of interested groups in quasi-legislative hearings provides local boards with a basis of information for the development of effective regulations and may help secure voluntary compliance with new or existing regulations.

1. Hearings should be scheduled far enough in advance for the parties involved to arrange their representation and to prepare their testimony.
2. Notice of the hearing may be made by publication in a local newspaper and through letters to interested groups and corporations.
3. When a new regulation is proposed, a preliminary draft ought to be available in advance of the hearing.
4. All parties should be given equal time to present their case.
5. Only hearing officers may ask questions of either party. Cross-examination is not allowed in quasi-legislative hearings.
6. Each group should be given the opportunity to submit a supplementary written statement.
7. Participation of parties is voluntary. Only in very rare instances is specific information subpoenaed for quasi-legislative hearings.

APPEALS



After the hearing, any individual not satisfied with the final decision of the board may appeal the decision to a court of competent jurisdiction.

In addition, any individual aggrieved by the neglect or refusal of the board or of a state agency to pass orders to abate a nuisance may apply to the county commissioners. The commissioners may then hear the case and determine if the board or the state has failed to enforce the sanitary code by not ordering an abatement (M.G.L. 111:141).

To apply to the county commissioners, the individual must, within 24 hours after the board's refusal to order an abatement, file with the board of health a written notice to the adverse party of his/her intention to apply to the county commissioners. Within 7 days of the notice to the board, the individual must submit a petition stating his/her grievance to a county commissioner.

PENALTIES

The local board of health may revoke or suspend permits and licenses it has granted, with or without a hearing as specified in the applicable laws and regulations. It is also authorized to seek in court to impose penalties on any individuals who violate provisions of the Sanitary or Environmental Code in any or all of the three following ways:

1. Anyone who impedes inspection of any structure, operation, or premises after a search warrant has been presented shall be fined not less than \$10 nor more than \$500.
2. Anyone who fails to comply with an order issued by the board of health shall be fined, upon conviction in court, not less than \$10 nor more than \$500. Each day's failure to comply with an order is considered to be a separate violation.
3. Anyone who violates any provision of the Sanitary or Environmental Code for which no penalty is provided in the code or in the General Laws shall be fined, upon conviction in court, not less than \$10 nor more than \$500. (Sanitary and Environmental Codes 105 CMR 400.700; 310 CMR 11.10)

VARIANCES

The board of health may grant a variance to the application of any provision of the Sanitary or Environmental Code (except provisions regarding conditions deemed to endanger or impair health or safety, and except for variances for solid waste disposal facilities which may be granted only by DEQE) when in the opinion of the board the enforcement would do a manifest injustice, provided that (1) it does not conflict with the spirit of the minimum standards, (2) all affected parties have been notified, and (3) a hearing has been held.

Variances granted by the board of health must be in writing. A copy of each variance must be kept in the office of the board of health. Notice of the grant of variance must be filed with the Commissioner of Public Health, or the Commissioner of DEQE in a case where a variance of a provision of the Environmental Code is granted.

The board may limit the variance by whatever qualification, revocation, suspension or expiration it deems necessary. The board may revoke, modify or suspend the variance in whole or in part by notifying the holder in writing. If this happens, the holder of the variance in question may request a hearing in accordance with regulations 7 and 8 of Chapter I of the Sanitary Code and Title 1 of the Environmental Code. (105 CMR 400.800[B]; 310 CMR 11.07, 11.08)

The Liability of the Health Officer¹¹

Situations in which a health officer may be held liable:

1. Negligent Performance of Ministerial Duties

Ministerial duties are duties described by law with specific directions for their actual performance. An example of ministerial duties is the recording of vital statistics. Negligent performance of this duty may result in liability for the health officer.

2. Destruction of Property

If a health officer destroys private property in good faith and with the belief that the property is dangerous to the public health, he/she may be held liable for damages if the property is later revealed not to have been harmful to the public health.

3. Slander and Libel

Health officers may be sued for alleged libel or slander. Libel is defined as "malicious publication," expressed in writing or by signs, images and pictures tending to discredit the memory of the dead or the reputation of the living, and exposing a person to public ridicule, contempt, or hatred. Slander is the oral expression of malicious discreditation.

Boards of health cannot be held liable for statements and comments made in good faith in official reports, official meetings, or otherwise in the exercise of official duties. However, if the information is false or the report goes beyond the need of the situation, there may be liability for any injury.

4. Treatment of Minors

In the event that a parent does not agree to the treatment of a child even in a life threatening situation, the health officer should not override the parent's objections. To decrease the potential of liability, the officer should obtain a legal authority through a court order to perform the necessary procedures.

It should be noted that MGL 111:117 permits treatment of children age 12 and over for venereal disease without parental consent.

Various sections of Chapter 71 of the Massachusetts General Laws permit or require physical examinations of school children by school personnel: MGL 71:55A describes procedures for handling sick, injured or incapacitated students, and permits school staff to render emergency first aid or transportation. MDPH has promulgated regulations for physical examination of school children (105 MR 200.000) and for use of psychotropic drugs in public schools (105 CMR 210.000).

5. Invalid Laws

A health officer may be held liable for acts of good faith under an invalid law. This situation poses an enforcement dilemma for the health officer. In any situation when the validity of a law is in question, friendly test cases may be brought to court to establish the validity of the law.

Situations When A Health Officer May Not Be Held Liable¹²

Health officers are generally not liable for mistakes or errors of judgment in the performance of duties where they are empowered to exercise judgment and discretion, provided there is no malice, or corruption, or a specific law that imposes liability.

For example, a health officer may not be held liable for a mistaken diagnosis when quarantining an individual.

Provided the officer has discretionary powers and therefore a choice of actions, there is no liability for failure to follow any particular course of action.

To avoid potentially liable situations, a health officer should be knowledgeable of the extent and limitations of his/her authority. In addition, the health officer should keep meticulous notes and records and should treat all individuals with whom he/she has contact in a courteous manner. For his/her own protection the health officer should carry malpractice insurance when it is available.

Court Procedures¹³

The board of health may start court action when other efforts to obtain compliance with local or state laws or regulations have failed.

In the course of its efforts to carry out its usual duties, the board may seek (1) to obtain a search warrant, (2) to obtain a temporary restraining order," or (3) to petition the court to set up a rent receivership in order to obtain funds for repairing dwelling units.

Forms for "affidavit in support of application for a search warrant," "petition to set up a rent receivership," and others are available at the district court, where they must be presented in person by a health agent, city attorney or board of health member.

To start court action to enforce compliance with the law, the health officer (member of the board of health or an agent of the board) signs and files with the court having jurisdiction, a **complaint**, sometimes called an **information**, setting forth completely and precisely the violation. The city or town attorney may file the complaint.

Most cases are heard before an inferior court, such as a magistrate or police court, which issues a **summons** on receiving the complaint, ordering the defendant to appear in court at a certain time. Cases involving state law, large sums of money, more serious offences, or injunctions are heard in a somewhat higher court of original jurisdiction where records are kept.

The court, at the request of plaintiff, prosecution, or defendant issues **subpoenas** for witnesses to appear in court at a certain time. Failure to be in court without adequate reason is considered contempt of court punishable by fine. Anybody can be subpoenaed as a witness. A **subpoena duces tecum** means that the witness shall bring with him to court all his records pertinent to the case; however, courts of appeal have ruled that the health officer may rightfully refuse to bring to court communicable disease records, for as a class such records are considered as being confidential and privileged.

Before the case comes to trial in court the defendant may file a series of **dilatory pleas**, such as demurrers alleging that the complaint has failed to state a cause of action, or various motions to dismiss or quash on technical grounds as alleged unconstitutionality or invalidity of the law in question, all calculated to delay the trial and possibly permit the defendant to avoid trial. Attorneys for the two sides file counter motions and answers until the court finally decides that the case shall be dismissed or that there is no further reason for delay and sets a date for the trial.

Boards of health should be careful to observe due process and to document their moves carefully in order not to lose cases at this level.

A **hearing** may take place before a clerk of court or magistrate, or before a justice, depending on the nature of the complaint. The hearing, or trial, before a minor judiciary such as a magistrate court usually involves somewhat informal proceedings that may be brief and simple. There is no jury. The health official and the defendant may stand alone before the judge, but usually there is also a city attorney prosecuting all criminal cases coming before the court. The defendant is entitled to be represented by an attorney. In the absence of attorneys the judge simply asks questions of both parties, but usually there is a city attorney who states the charge and questions the health official to substantiate the charge. Defendant's attorney then answers, or if the defendant has no attorney the judge, or the city attorney for the judge, questions the defendant. The judge usually gives his opinion at the end of the trial, though he may postpone his opinion until later. No record is kept of testimony given. The opinion may be appealed.

Hearings before a court of record are more involved and formal. A jury may be chosen, which can take considerable time. The health official sits quietly beside the city attorney at a table and does not participate in the proceedings until called as a witness for the prosecution. The prosecution presents its case first, and after the prosecution has presented a witness, the defendant may cross-examine him at once. When the prosecution has finished presenting its case the defendant presents his, and after each witness for the defense has testified the prosecution may cross-examine. There is a final rebuttal and summation by both sides, the judge all the time keeping proceedings in order and ruling on matters of law. Finally the judge gives a brief summary to the jury, if any, which then decides questions of fact or the judge if no jury is sitting, giving the verdict of guilty or not guilty. The judge gives a sentence and that ends the case, unless appealed to a higher court.

The function of the jury is to determine facts; the function of the judge is to rule on matters of law. The defendant is always entitled to trial by jury, but may waive his right. Usually there is no jury when various writs are heard since they are nearly always questions of law for a judge to determine.

Precedence of Laws

The various written (or statutory) laws in this country are in order of diminishing precedence as follows:

1. The Federal Constitution.
2. Acts of Congress and Treaties.
Rules and Regulations of certain executive departments.
3. State Constitutions.
4. State Legislation.
Rules and Regulations of State Boards of Health.
5. Municipal Charters granted by States.
6. Municipal Legislation.
Rules and Regulations of local Boards of Health.

D. AREAS OF JURISDICTION: STATE, LOCAL, FEDERAL

In general, local board of health responsibility for enforcement of state and local regulations extends to privately or municipality owned or operated facilities, buildings, or programs, within the boundaries of the municipality. Privately owned or operated concessions, camps, schools or other programs are subject to applicable local licensure and inspection whether located on public or private land. That is, ice cream vendors on public beaches, private day camps in state parks, private concession snack bars in federal office buildings, and other such programs and services must obtain local licenses and comply with state and local minimum standards and regulations.

When programs, facilities or services involve more than one town (such as recreational camps, beaches, or private schools on land in two adjoining towns) statutes and regulations usually specify that the boards of health of the towns involved "may coordinate activities in effecting compliance" with regulations. In practice, there may be a division of responsibility according to where the structures, headquarters or facilities are, in fact, located. For instance, a camp whose buildings are in one town, will probably seek its camp license from that town, but if its swimming pool is in another town's boundaries, it may seek its swimming pool permit from the town in which the pool is located. In any case, it is important that each town be sure that the camp is appropriately licensed and inspected, and that state officials check water sources and sewage disposal facilities.

Homeowners and others who happen to be located on town lines do frequently have to obtain permits from **both** towns for such things as individual sewage disposal system and private wells. If local regulations in the towns differ, the owner/operator will normally have to comply with the more stringent regulations.

When sanitary or health problems arise in state or federally owned facilities over which the board of health has little or no jurisdiction, the board may wish to send a formal notice or complaint to the responsible agency, and investigate various alternatives for obtaining proper enforcement of the sanitary or environmental code or other regulations. For example, a board of health may receive a complaint regarding conditions in state-owned housing units at a state college or university, or the board might be aware of unsanitary conditions in a state-operated food service establishment. If a direct complaint to the agency involved does not get results, the local board of health should request advice and assistance from MDPH or DEQE as appropriate. The board of health should also be able to assist tenants or other affected persons in determining their rights to petition state agencies, county commissioners or the courts to seek enforcement of minimum standards. Checking with the MDPH or DEQE Regional Offices, legal departments, and with town counsel may provide the board with a sound basis for following a particular course of action.

In some cases, however, where jurisdictional boundaries are unclear, the board of health may find that a court test is the most satisfactory way to obtain clarifications.

When the source of a problem affecting a town is located in a different town, the board of health may seek to have the board of health in the town where the source is located take necessary action to remedy the situation. If no satisfaction is gained, the offended town may request MDPH or DEQE to take action, if violation of state regulations is involved. Regional authorities may have to be involved, if air or water pollution or other problems dealt with on a regional basis are the cause of concern.

State and federal authorities regulate intra- and inter-state commerce, respectively, and provide or help to finance a wide variety of programs to promote the general health and welfare. State or federally funded programs may finance, through grants or contracts, services and facilities that are subject to local inspections and permit requirements. Unless the state specifically provides for enforcement of the sanitary and environmental code by a state agency in such facilities as half-way houses for de-institutionalized patients, the local board of health should assume that it has the same authority and responsibility as it has over any other private facility. The board may wish to notify the state contracting agency as well as the facility itself of any problems or violations of regulations. The board may find that a constructive approach to follow with any program for special population groups is to inform the program of board of health services and responsibilities, and to request that the program provide the board with a full description of its services, clientele, special needs and problems, and administration. The board of health may also initiate communications with relevant state agencies to be kept informed so that it can anticipate and plan for substantial changes that have an impact on need for nursing services, sanitarian's services or other board of health involvement.

Checking the sanitary conditions of jails, lockups, prisons, houses of correction and reformatories is the explicit responsibility of the district health officer (MDPH), as specified in M.G.L. 111:20 and 21. If any problems come to the attention of the local board of health, it should notify the Regional Office of MDPH so that the district health officer can investigate.

See Appendix II (2) for: "definitions relating to the hearing in court," and DEQE's "material required in any request for an adjudicatory hearing."

CHAPTER 2.

CHAPTER 2. Legal Authority and Procedures

Sources and Scope of Authority and
Responsibility
Rule-Making
Enforcement and Due Process
Areas of Jurisdiction:
Federal, State, Local

CHAPTER 3

ORGANIZATIONAL OPTIONS

INTRODUCTION

The administrative structure through which municipalities in Massachusetts carry out their public health responsibilities varies with the size and tradition of the municipality, from Board of Selectmen retaining all responsibility to complex city health departments with highly specialized staff. Regardless of size and structure, the local official health agency has been delegated the **full responsibility**, in the first instance, for enforcing the state sanitary and environmental codes, and for protecting the public health of the community by enforcing state laws, by adopting reasonable local health regulations, and by carrying out preventive programs.

Local health agencies should review their administrative structure periodically to determine whether or not the structure is appropriate and effective in accomplishing the duties of the agency. Especially in growing towns, additional staff or staff with revised job descriptions may be needed to cope with changing needs. For example, a town growing from a few thousand to over 10,000 in a decade may require a qualified health agent, such as a registered sanitarian or certified health officer, and a clerk to handle the necessary paperwork of a board of health, instead of having the board of health members (or selectmen) attempt to do inspections and paperwork themselves.

In addition to making inspections, granting permits, reporting vital statistics and diseases dangerous to the public health, and fulfilling its other state-required responsibilities, a local health agency should have the time to assess community needs in the field of preventive health services, and to adopt policies and, when needed, local regulations and programs. High quality staff should be able to carry out routine responsibilities, handle paperwork, keep good records and analyze data, and prepare draft budgets so that the board can devote its time to policy questions.

Throughout this Guide, the term "board of health" is used as it is in state statutes and regulations to mean "the appropriate and legally designated health authority of the city, town, county, or other legally constituted governmental unit within the Commonwealth having the usual power and duties of the board of health of a city or town, or his or its authorized agent or representative." The composition and structure of boards of health in Massachusetts vary greatly, depending upon how the town or city charter (and by-laws) establish the "legally designated health authority."

Statutory authority for boards of health includes the following variations:

1. Town may elect the board of health (usually three members for three-year staggered terms, as provided in M.G.L. 41:1).
2. If the town does not provide for a board of health, the selectmen act as the board of health (M.G.L. 40:1).
3. Towns may vote to have the selectmen act as a board of health, or to have the selectmen appoint a board of health (M.G.L. 41:21).
4. Towns adopting a Town Manager form of government may include in the Town Charter, as one of the duties and powers of the Town Manager, the duty and power to appoint the board of health. Increase or decrease in the size of the boards may also be included in the Town Manager's powers (Town Manager's Act, Chapter 11, Acts of 1951 and Chapter 512, Acts of 1972; M.G.L. 43:103).
5. In cities, the mayor appoints the board of health (three persons including one physician, and including no member of the city council), unless the city charter provides otherwise (M.G.L. 111:26).

6. Cities or towns may vote to accept M.G.L. 111:26A-E, in order to create a health department and position of commissioner of health, with a required advisory council of nine persons (of whom two must be physicians, and five "non-professionals"). The Commissioner of Health (who must be a physician unless otherwise provided by enabling legislation) assumes the duties and powers of a board of health. The advisory council is appointed by the mayor (city) or board of selectmen (town).

Besides organizing their municipal boards of health in a variety of ways, towns and cities may enter into agreements with other towns or cities to obtain services on a regional basis:

Two or more towns may jointly appoint a health officer, to be responsible to the regularly constituted boards of health of those towns. A joint committee composed of the board of health of the member towns shall appoint and determine components and duties of the health officer (M.G.L. 111:27A).

Two or more towns or cities may form a regional health district with a regional board of health, which takes the place of the local towns' boards of health except insofar as the regional health district may by majority vote delegate certain powers and duties to the constituent municipalities. In this instance, the regional board of health hires a full-time director of health, either a physician or lay person with professional academic training and experience in public health administration (M.G.L. 111:27B). Such regional public districts may apply to the Commissioner of MDPH for partial reimbursement of initial capital outlays for establishing a regional district (M.G.L. 111:27C).

Towns may vote to increase the size of the board of health, according to procedures outlined in M.G.L. 41:2. The arguments for and against having larger boards of health parallel the arguments for enlarging or keeping small any other decision-making group: a small board can work efficiently, with fewer people to bring together for meetings; a larger board can be more representative of community interests, knowledge, and professional expertise.

ORGANIZING STAFF

There may be considerable variation from town to town in the mix of tasks that need to be performed by health department staff, depending on the size, composition, and environment of the community. Most of the tasks, however, are common to a large majority of towns. Many health departments and boards of health employ physicians, public health nurses, sanitary inspectors, food inspectors, health officers, clerks and other specialized personnel depending on their indigenous needs. If a town has no resources to hire any staff for the board of health, the responsibilities must be assumed by the board members and existing town officials, such as the town clerk.

The titles of the personnel hired may vary, but the common functions and distribution of responsibility should be identifiable. M.G.L. 111:27 provides in general for the governance of boards of health.

"Every such board shall organize annually by the choice of one of its members as chairman. It may make rules and regulations for its own governance and for the governance of its officers, agents, and assistants. It may appoint a physician to the board, who shall hold his office during its pleasure, may choose a clerk, who in a city shall not be a member of the board, and may employ the necessary officers, agents, and assistants to execute the health laws and its regulations. It may fix the salary or other compensation of such physician and its clerks, and other agents and assistants."

The position at the top of the health department hierarchy carries responsibility for the planning and implementation of all of its programs. This is in sharp contrast to other staff who may have responsibilities only in certain program or specialty areas, and who may have only part-time, defined, and limited responsibilities; for example, a certain number of food establishment inspections per week. The administrative officer of the health department has a responsibility to have a comprehensive knowledge and understanding of the public health law, sanitary code and environmental code under which that department will operate. Several titles are commonly used to identify the administrative officer of a local health department.

1. Commissioner of Health (as allowed in M.G.L. 111:26A).
2. Agent and/or Director of Public Health (as allowed in M.G.L. 111:30).
3. Inspector of Health or Sanitarian (as allowed in M.G.L. 41:102 and M.G.L. 111:27).

One useful procedure for preparing an outline of responsibilities is to draw up an organizational chart of the health department. Lines of authority and responsibility should be established but never considered permanent, since good organization, as well as progress, depends partly on the skills and personalities of the individuals involved and partly on the nature of the functions to be performed. A health department is continually changing and growing, and accordingly, its structure and staff responsibilities must be adaptable.¹

To carry out its mandate, the local health department in a rural or small urban situation requires a relatively simple type of organizational structure. Normally a board of health will appoint a **health officer**, part or full time, who is responsible for the employment of all other personnel and the assignment of tasks. In this way responsibilities and authority are likely to be clearcut and understood by all those concerned. All members of the staff should be ultimately responsible to the health officer, who in turn is responsible to the board.

The board of health may appoint an **agent** (who may be one or each of its members, or the administrative officer of the board or of an association of boards of health) subject to its direction and control to act for it in case of emergency, or if the board cannot conveniently meet. Such an agent has all the authority of the board, but he is required to report emergency actions to the members within two days for their approval.

ADVISORY COUNCILS, COMMITTEES

Cities having a commissioner of health and a health department are required to have an advisory council of health as defined in M.G.L. 111:26C, which advises and assists the commissioner of health. Boards of health providing home health services certified by the Medicare and Medicaid programs have professional advisory committees to advise them on their services, procedures and evaluation.

In addition to such mandated advisory groups, boards of health may establish either standing or ad hoc advisory committees to assist them in evaluating their services, planning to meet anticipated needs, or providing ideas and recommendations regarding policy issues. Other chapters in this Guide, such as "Outreach and Education," suggest issues that can often be handled better if the board of health involves the community in discussion of what the real problems are, and how they can best be addressed.

SHARING APPOINTMENT OF STAFF

The shortage of qualified health department personnel in small and mid-sized towns severely restricts both the quantity and quality of service that can be offered to town residents. This often results in less than optimal health and environmental services. The repercussions from this unfortunate situation may include drinking water contamination, toxic waste contamination, unsafe housing, unsanitary restaurants, inadequate nursing services, lack of health education activities and unsanitary sewage disposal. With increasing fiscal pressures, local officials are reluctant to provide additional municipal services and are reluctant even to maintain traditional services if no constituencies argue in favor of maintaining them. At the same time, however, many towns are growing to the extent that numerous public health services are sorely needed.

The intermunicipal employment of qualified health personnel offers retention of local authority by boards of health while providing professional health expertise at a feasible cost to constituent towns. Commonly, in arrangements like this, the staff implements all public health programs and routine enforcement tasks and then advises each local health board when important or controversial decisions must be made. When the cost is split among several towns, each town benefits from a cost effective method of providing a wide range of activities.²

Legal Authority for Sharing Appointment of Staff

A. Primary Option for Towns

Under authority of M.G.L. 111:27A, two or more towns (not cities) may form a district for the purpose of employing health agents. The following arrangements should be noted:

1. **This association is completely voluntary and non-binding.** All staff employed by the association are employees of each cooperating community and under their jurisdiction.
2. The joint committee:
 - appoints personnel and sets compensation
 - determines the relative amount of service employees will render to each town
 - estimates, each June, the amount of funds needed to operate the district for the coming fiscal year
 - determines the proportion of costs and expenses to be paid by each town.
3. Any constituent town may withdraw from the "district" association by vote before December 1. Formal withdrawal takes place on the January 1 following the vote of Town Meeting.
4. Each town retains the authority of making "reasonable health regulations," which are then enforced by the association's employees acting as the town's agents. (M.G.L. 111:31).

Suggested Provisions

In addition to the above provisions, the Association in north-central Massachusetts, Nashoba Associated Boards of Health (NABH),² has adopted several by-laws to facilitate accountability and ensure an equitable arrangement for all members. These include the following:

1. Each member town has one vote in the decisions of the association.
2. The association board meets four times per year at regular intervals and notice of these meetings must be sent at least two weeks in advance to each board member. Notices for special meetings must be sent at least five days in advance.
3. In matters affecting the group of towns as a whole, a majority vote of towns present at the meeting is needed to vote. The association has no voice in matters pertaining to an individual town.
4. Every member town pays for its share of the association's services whether or not it makes full use of these services. Funding is on a per capita basis.
5. No special programs or contracts can be initiated between the Director and an individual town without the association's approval (but individual towns may receive federal funding for special programs).
6. At the close of each fiscal year (June 30) a standard business audit is made of the association's accounts and is placed on file.
7. All records of inspections and tests performed by the association's staff must be reported promptly to the board of health in the town concerned. These records are released only to the board of health of the individual town where the work was performed.
8. The association has four officers — Chairman, Vice-chairman, Secretary, and Treasurer — each having specific functions and duties.

The Nashoba Example

The Nashoba Associated Boards of Health was formed in 1931 with fiscal support from the "Commonwealth Fund," a private foundation. At present 16 towns (with a combined population of 81,000) belong to the Association. Nashoba towns are provided with a range of professional services unmatched by other Massachusetts towns of comparable size. For example, enforcement of Title 5

(subsurface sewage disposal) — a major problem for many small and mid-sized towns — is handled effectively due to availability of full-time professional staff. The following is a list of costs incurred and services received by member towns during fiscal year 1979–1980:

PER CAPITA COST: \$3.225
 PER CAPITA ASSESSMENT: \$2.71 (cost minus fee income)

STAFF:

- 1 medical director (part time)
- 1 associate director (administrative chief)
- 6 sanitarians
- 1 lab technician
- 1 lab aide
- 2 secretaries
- 1 medical social worker
- 3 dental health specialists
- 14 public health nurses

SERVICES:

- full range of inspections
- rabies control clinics
- testing of drinking and bathing water
- distribution of free vaccines
- well-child clinics
- immunization clinics
- dental health services
- well adult and oldster clinics
- home health visits
- medical-social work consultations

B. Secondary Options (for Cities or Towns)

1. Two or more cities or towns may form a regional health district with a regional board of health, a director of health, and staff (M.G.L. 111:27B). The regional board shall be composed of at least one representative from each constituent municipality, and more depending upon population size. Unless certain powers are specifically delegated to constituent municipalities, regional health district shall have all the powers normally held by boards of health or health departments. Because of greater limitations on "home rule," this form of consolidation has not been adopted by any Massachusetts municipalities.
2. A county-wide health department may be formed. At present, only Barnstable County has a county-wide system, established in 1926 by a special legislative act. There exists no specific enabling legislation to form a county system, but special legislation can be introduced. Under Barnstable County's system, the Health Department is funded through the County Commissioners and acts to supplement and coordinate — not supersede — individual boards of health within a county.

CONTRACTING FOR PROFESSIONAL SERVICES

One way boards of health can expand their services or continue to provide services efficiently is to enter into contractual agreements with other agencies and organizations. Such agreements can help the board of health meet the needs of its town and community, and can be incorporated as part of the overall program planning process.

The authority to contract for services gives a board of health a broad base of resources to draw on. The contracting mechanism can be effective because it may:

1. increase flexibility in meeting changing needs.
2. provide access to existing community, district, regional or other specialized services, in proportion to town needs.
3. save administrative time, overhead and start-up costs of services.
4. avoid duplication of services and of staff development.
5. strengthen existing community agencies' ability to provide more comprehensive services.
6. free the board of health and its staff to devote time to other responsibilities.

Examples of services that the board of health might purchase by contract are as follows:

- nursing services
- environmental sanitation inspections
- home health services for premature infants and other high risk infants, children, or adults
- clinics – well baby, well adult, screening for selected problems, immunization, dental
- school health services
- health education programs.

Legal Authority

Town governments and/or boards of health have the authority to contract for services for the exercise of their corporate powers. Towns may appropriate money to meet needs, including those related to public health and the performance of the duties of the board of health (M.G.L. 40:5[19]). "Contracts for health services may be made by the board of health or any legally constituted board performing the powers and duties of a board of health" (M.G.L. 40:4).

Towns may also make contractual arrangements for such services as public health nursing services, homemaker services, sanitation, waste disposal, and such disposal may be managed by the selectmen, board of health, or other officers having charge thereof (M.G.L. 40:4). Greater flexibility is further provided through M.G.L. 40:4A which states that any government unit may enter into a contractual agreement with one or more other government units to perform jointly, or for the other unit, or units, any service which each contracting unit is authorized by law to perform.

Procedures for contracting for professional services may differ among towns because boards of health differ in their relationships with their local governments, and because towns may have by-laws regulating contracting for services.

Barriers to Contracting for Professional Services

Scarcity of funds is the major curb on the use of contracting. While contracting services may appear more economically feasible than hiring additional staff, it is still an expense that must be justified with some cost-benefit analysis. Foresight is needed in planning for contracted professional services. The board of health budget should include anticipated needs for contractual agreements.

Another barrier to effective use of contracting is the concern that the board of health may lose its responsibility for services being offered when its own staff is not providing the service. To avoid this problem, a board must make its goals clear, and require periodic reporting on services rendered.

While it is important to define the tasks to be done under contract so that financial calculations can be made and accountability assured, boards of health may wish to build into their contracts provisions to enable and encourage the contracting providers to conduct those public health functions (such as communicable disease follow-up) for which it may be difficult to predict the level of need.

For boards of health to meet the growing demands for public health services, they must investigate alternatives to direct service. Contracting for professional services is an avenue of response to specific community needs which the board of health may use to take advantage of resources available in the community in a cost-effective manner.

STAFF EVALUATION AND EDUCATION

To know whether a person is doing a good job, one must know what job she/he is supposed to be doing, and whether or not there are any standards to which actual performance can be compared. Since laws and regulations rarely specify which individual is expected to carry out particular functions, it is important that the board of health specify in writing the expected duties of anyone it hires, including both specific and general responsibilities. Often the board of health will prepare a job description for the administrator, who will in turn have as part of his/her responsibilities the preparation of other job descriptions and standards, subject to board review.

Once overall responsibilities have been identified, the board or the administrative person may be able to establish expected time and effort, or the expected frequency, of particular tasks. For instance, if there are three summer recreational camps in a town, there should be at least three camp inspections in the spring. If a town provides home health services, a reasonable estimate of visits per day (or per half-week if the nurse devotes half time to home health services) can be made. Projections or objectives for time devoted to health promotion, counselling, planning and continuing education can also be made.

Next, a record-keeping system to keep track of volume of services, time spent on various tasks, travel time and time spent on administration will enable the board or the administrator to compare real performance with expected performance. If reality differs a great deal from expectation, consideration of the difference may lead the board or administrator either to redefine expectations or to consider ways to improve or influence the staff person's performance. The board or administrator may decide to review the facts with the staff person to suggest ways to improve efficiency or effectiveness.

Professional associations may also be able to suggest guidelines or performance standards for a particular profession, such as nursing or sanitary engineering. Formal accreditation, certification, and registration mechanisms exist in many health fields to ensure minimum levels of competence.

Continuing education opportunities in universities and colleges provide a means for board of health staff to refresh or broaden their knowledge. In-service education programs, arranged by the board of health staff, also can be used to up-grade the quality of staff.

CHAPTER 3.

CHAPTER 3. Organizational Options

- Introduction
- Organizing Staff
- Advisory Councils, Committees
- Sharing Appointment of Staff
- Contracting for Professional Services
- Staff Evaluation and Education

CHAPTER 4

PROGRAM PLANNING, BUDGETING AND EVALUATION

BOARD OF HEALTH RESPONSIBILITIES

1. **Provide for fulfillment of its duties** (M.G.L. 111:5, 26-33 and other sections as described in this guide) including enforcement of the state Sanitary and Environmental Codes, reporting diseases dangerous to the public health, and enforcement of other applicable state and local laws and regulations. These duties necessitate planning and budgeting.
2. City boards of health must **prepare and present an annual budget** (M.G.L. 111:28); town boards of health are generally required by town councils and/or finance committees to prepare an annual budget.

RECOMMENDED ACTIVITIES OF THE BOARD OF HEALTH

1. Determine the health needs of the community (and the health services available to the community) in terms of the size and characteristics of the population, specific health problems, and environmental conditions.
2. Determine the resources available for meeting health needs: services, agencies; personnel at local, state and federal levels.
3. "Plan, organize, manage and coordinate services within its jurisdiction to meet the collective health needs of the population in an effective and efficient manner."
4. Consider the general laws dealing with the power of towns to make contracts and appointments (M.G.L. 40:4, 4A, 5), the responsibility and authority of town employees (M.G.L. 41:1, 2, 102, 102A, 106A), and the general powers and duties of health departments and town boards of health as stated in M.G.L. 111:5, 26-33 and as specified elsewhere in the general laws, state regulations and local regulations.

RATIONALE

Each town and city, large or small, must adopt a budget each year which includes estimated expenses and income of the board of health and all other municipal bodies. The budget process requires that cities and towns determine what services they provide because either state law requires them or the citizens want the services to protect and enhance the quality of their lives. Program planning can be thought of as the mobilization of all resources and facilities to the best possible effect so that problems are solved. It is an active process where support for the board can be built and needs can be met.

Program planning progresses through several phases:

Phase 1. assessment of needs:

- requirements for meeting statutory duties
- requirements for meeting expectations of the municipality
- community health problems or concerns needing attention

Phase 2. evaluation of financial and staff resources

Phase 3. setting goals, objectives, priorities

Phase 4. selecting strategies, including budget and financial strategy

Phase 5. evaluation of outcome or results, and evaluation of process (how well the system is working, efficiency, effectiveness).

The manner in which responsibilities are discharged may depend in part upon the size of the municipality and the resources available to it. In the smallest towns the board of health (or selectmen) and the town clerk may contract with one or more nurses, sanitarians, or other health professionals on a part-time basis to provide the few inspections and other services required by law. Regardless of size, however, it is a responsibility of the board of health (or selectmen acting as board of health) to review periodically the health needs of the town and to take appropriate steps to meet whatever needs arise, regardless of the way in which needs have arisen.

In the 1980's, for example, protection of water supplies may require increased local attention and expenditure. Towns with substantial growth or shifts in population characteristics may need new, expanded or different services. Boards of health may have to respond to increasing demands and needs for services with few, if any, additional resources. They should consider innovative approaches to their responsibilities, and participate in town policy-making regarding growth, development and protection of town resources. Costs and benefits of alternatives can be analyzed by the board of health.

Cooperative arrangements with neighboring towns may facilitate more and better services at a lower cost than could be provided by a town on its own, in such diverse areas as sanitation and home health services.

A board of health that employs professional staff retains the responsibility to **set policy**. Staff carry out policy decisions, keep accurate records and keep the board well-informed about staff activity. The staff can greatly assist the board by keeping in touch with town staff in other departments, state and federal officials, and community groups interested in housing and human services. The staff also provide the board with analyses of community needs and report on how board of health programs relate to those needs.

In order to weigh the advantages and disadvantages of potential policies, programs and expenditures, the local official health agency, be it board of health or board of selectmen, with the assistance of the health department, if available, begins well in advance of budget deadlines to (1) determine the health needs of the community, (2) set goals and list objectives for its own activities for the coming year or longer periods, and (3) develop strategies for accomplishing its goals.

If objectives are defined quite specifically, such as providing pre-schoolers with immunizations so that children entering first grade will be fully immunized, then the degree of success can be measured. *The Model Standards for Community Preventive Health Services* (Report to Congress from the Secretary of Health, Education and Welfare, August 1979) should greatly aid local health agencies in their effort to establish goals and objectives and to measure progress.

The chapters below on data management and on outreach and education provide more detailed descriptions of methods for handling and using statistics, and for developing community support. The sections immediately below in this chapter are intended to outline the **process** local health agencies can follow, given the nature of town-centered politics in Massachusetts, to fulfill the overall **goal** for administration and supporting services as defined in the *Model Standards for Community Preventive Health Services*

In summary, to meet community needs for health-related services, it is suggested that boards of health adopt a general procedure which:

1. assesses needs
2. evaluates resources
3. sets realistic objectives
4. selects effective strategies
5. evaluates program outcomes and processes.

Determining the Needs of the Community

Needs assessment should include each of the following:

- review of available statistics, reports, surveys and studies relating to community health needs

- solicitation of information and opinions of town and regional officials, community groups and voluntary agencies regarding their perceptions of needs
- (optional) conduct of surveys/studies/analyses specifically designed to obtain or refine information on community needs
- review of past experience of the board of health/official health agency.

A board of health can begin the process of determining local needs for public health services by reviewing its own information and that available through town selectmen, planners, and finance committees, county commissioners' offices, and regional health planning agencies. Questions such as these should be addressed:

1. Is the population growing, shrinking, staying the same? Is age or economic mix changing?
2. Is unemployment increasing or decreasing?
3. Are growth and employment trends affecting the quality of the housing stock adversely or positively?
4. Does the town have any policies regarding growth, e.g., desired or acceptable rates and types of growth, designated locations for development?
5. Do town commissions and boards cooperate in carrying out town policies, and in anticipating future needs (e.g., water supplies, sewage disposal, solid waste disposal)?
6. Are there unusual morbidity (sickness) or mortality figures indicating the need for public services of particular types?

Sources of community information for evaluating population trends, growth problems and town policies are listed in Appendix II(4).

From its own records and those of the school committee, the board should be able to learn a great deal about the immunization status of children in the community, about the frequency and nature of sanitary code violations, the number of new housing starts, and births and deaths in the community.

Meeting with active community groups and other town commissions and committees to share information and concerns may be productive. Health-related problems such as deteriorating water quality, high teenage pregnancy rates, and housing problems may be dealt with effectively through joint efforts with other groups. If the board is considering adoption of new local public health regulations, it is particularly useful to know the extent of community interest in and support for such changes.

Advisory committees, either standing or ad hoc (set up to consider a particular issue), may be helpful in evaluating needs, suggesting solutions, and endorsing proposed programs. Joint committees with other town boards or assignments of liaison persons to promote communication among town bodies may also facilitate both assessment of needs and plans to address those needs.

Assessment of community health needs may vary from rather simple data gathering as required by law to a much more sophisticated process that is called for by the more complex problems that are more common in larger communities. Even in smaller communities, however, health officials must be alert to the presence of new or unsuspected problems. If a board has **specific** concerns or questions, detailed data-gathering and analysis may be in order. If the board is interested in an extensive needs assessment, it should be certain to **clarify** the questions it wants answered. In any event it should seek help from the regional office of MDPH if it is uncertain about the extent, or means, of solving health problems.

Analyzing Financial and Staff Resources

In order to establish realistic, achievable objectives, the agency must determine what resources it has currently available, and what additional resources it might be able to acquire.

Financial Resources:

Tax revenues, fees for licenses and permits, reimbursements for home health services, and fees collected for other services are the usual revenues supporting local health services, with grants and contracts providing additional funds occasionally. In Massachusetts municipalities, however, all "income," that is, revenue generated by the town's public health programs, goes into the general fund, and all expenditures must be budgeted in the town's operating budget and capital expenditure budget. Thus any increase in services accompanied by increased expense shows as an increase in the departmental and town budgets, regardless of the degree to which the increased expenditures are offset by increased revenue. This situation poses a serious challenge to municipal health programs in the era of "tax cap" considerations, particularly where expansion of reimbursable services would increase productivity, efficiency, and cost-effectiveness of a program.

Thorough documentation of expenditures, services provided, population served, and revenue generated by programs will help the health agency show the benefits and actual net costs of its programs to the town or city. If the agency wants to expand a program, and anticipates that additional revenue will offset increased expense, it has a strong argument for obtaining the endorsement of advisory groups, town manager or mayor, finance committee and town meeting, aldermen or city council.

Staff Resources:

To assess staff resources, the board should consider both number of full-time equivalent employees in each job position and the allocation of time of these staff people. For instance, if five nurses cover school, home health, and community clinic programs, what portion of time is actually devoted to services and to administration in each area? And is the allocation of time consistent with the board's expectation and priorities? The board may profit from checking with other agencies or with MDPH staff in the regional office to learn about workload and productivity in similar settings.

The capacity and ability of staff to absorb additional duties may be of interest to the board. Information on the availability of staff from other agencies to perform contracted services is helpful if this option is considered by the board.

Setting Goals and Objectives

The board reviews needs and resources to come up with goals and objectives. "Needs" may include broad mandatory responsibilities and other perceived or documented needs, and standards and guidelines like those identified in *Model Standards for Community Preventive Health Services*.

Setting goals and objectives helps focus plans and establish criteria for measuring success. Goal setting is a basic managerial tool, as it lays the groundwork for developing strategies and periodic evaluations of effectiveness and cost-efficiency.

The **goal** for safe drinking water may be that "Residents of the Community will have access to drinking water free from contaminants." Objectives, or specific targets or standards by which progress toward the goal can be measured, include

1. objectives for **outcomes**, such as "By 19__ there will be zero confirmed outbreaks of waterborne illness from those water systems serving more than 15 connections or 25 or more persons more than 60 days a year;"²
2. objectives for the **process**, such as "By 19__ the community public water system will meet Federal and State bacteriological and chemical standards," and "By 19__ the community will have a program to assure adequacy of location and construction of new private wells."³

Objectives underlie the planning process and, when stated explicitly, help avoid conflict and confusion. Setting objectives can help the board of health and staff clarify roles and functions, develop strategies for implementation, acquire a common framework for what is to be done, evaluate the program based on the attainment of objectives, and make decisions based on reference to the objective.

Every objective should incorporate five specifics to make it clear:

1. what are the desired results?
2. how much is to be achieved?
3. who are target groups for action?
4. where are the geographic boundaries for the program?
5. when should the objective be fulfilled?

After setting goals and objectives, the next step is to **set priorities**: which objectives are most important, and which are most deserving of funds and staff time. Boards generally weigh the extent of need, resources available, and political considerations in making decisions about priorities.

Strategies and Budgets

The board has to decide how to go about achieving its goals: should it depend on itself, volunteers and existing staff, or should it consider additional staff, contracts or purchases of specific facilities or services? Should it be aggressive in finding local support, or rely on past supporters? Should it call attention to program changes, or down-play them?

Such strategic decisions cannot be prescribed, since personalities, issues and political influences vary greatly from town to town. Boards should certainly give thought, however, to the strengths and weaknesses of whatever approaches they consider, and be prepared to defend their proposals and methods for achieving their goals.

A major annual strategic problem may be getting the budget through town meeting. Most boards of health use a line-item budget which may be organized into salaries and wages, operating expenses, and capital expenditures.

A **program budget** shows the same items, but for separate programs provided by the board, so that everyone can see the resources put into each segment of board activity. Income generated by various programs can also be shown so that **net** costs of various programs can be measured. This approach provides the community with information enabling it to make comparisons among programs, and to decide where resources should be shifted or new resources sought. At budget time, a town meeting or city council that is aware of community health needs can make better informed decisions when weighing "health" priorities against other town needs.

One strategy boards or their staff may use to educate the public about needs is to report to or solicit discussion and support from interest groups in the community that may be particularly concerned.

Interactions with Other Agencies and Town Bodies

Most boards of health and health departments cannot afford the services of a full-time professional in each of their program areas (see section on contracting for outside services, p.). But they may voluntarily join with other agencies to work collaboratively on a project and share staff. For specific programs, it may be possible to draw support from other agencies having an interest in the particular area of concern.

Interaction with other agencies and town bodies occurs at all phases of program planning. Town bodies such as fire departments, housing authorities, finance committees, town councils, and conservation commissions, all have concerns that overlap with or have impact on board of health concerns. Board of health members must often assume a political role, so open communication and close cooperation with other elements of local government facilitate effective action.⁴

Evaluating Programs, Services and Staff

Evaluation can serve two purposes:

1. Determine how effective a program is in reaching its objectives and in solving identified problems.
2. Provide information necessary to make appropriate changes and adjustments in the program as it proceeds.

In simple terms, evaluation means checking to see if programs and people are doing their intended jobs, as described in program objectives, job descriptions, or other definitions of expected performance. The board will probably be interested in cost, quantity and quality of services. It may also be interested in the **outcome** of programs, that is, the impact its services have on the health of people in the community, and on the status of the environment in the town.

To make an objective evaluation, rather than a subjective one based on impressions and guesses, it helps to have the following:

- a. accurate statistics on current activities and costs
- b. measurable criteria (e.g. **expected** numbers of inspections or number of children to be checked for immunization status)
- c. program descriptions, job descriptions, which state the expectations for the program or job
- d. comparative data (e.g., historical information such as budgets and statistical reports of services provided for the last few or many years, if relevant; data from other towns and cities with similar populations, problems or services; national or state standards).

To measure the **impact** of a program, the board may have to conduct a survey or special study, in which case it should be sure that it will be possible to compare the conditions "before" and "after" the program, or that some other valid means of measuring "impact" is available.

If the board is interested in comparing costs to benefits, it will want to compare expenses to the amount of service provided (amount of time, number of visits or site inspections, etc.), number of people served, proportion of the target population reached, and perhaps quality of performance.

Very often the board of health is concerned primarily with meeting its mandated responsibilities. Evaluation is looked upon as a diversion that takes valuable time and resources from the board. Evaluation efforts have the potential, however, for bringing greater rationality to the decision-making process. Boards can utilize valuable staff by concentrating on a limited-scope evaluation. Evaluation conducted by outside consultants may provide needed credibility to the board of health and help support future programming.

Investigating Other Funding Sources

Funding on the local level has been primarily self-generated. Most monies come from local taxes and revenue sharing, and outside sources have not been well investigated. Boards of health may wish to explore outside sources of funding to finance new programs or additional services.

When the board of health has a project in mind, it is very important to generate as much local support as possible. Try to locate philanthropists in town who may be willing to help. Cooperative efforts with other agencies may help to secure funds for those who individually do not have the resources needed to write a grant proposal.

The process of identifying a funding source has three basic steps: First, locate a funding source whose programmatic interests coincide with those of the proposed project. Second, develop the idea sufficiently so that it is plausible and creditable. Third, prepare an application to be sent to the potential granting agency by a specified deadline.

Finding a Source

There are two types of funding sources: private foundations and public agencies. In either case, it is necessary to find out as much as possible about the source you approach for funds. The Annual Report of a foundation usually provides information about the foundation's interests, objectives, and sizes of grants. The most common reason for the rejection of grants is that the project is not amenable to the interests of the funding source. Poor financial management is another major reason funding requests are rejected. It is vital to have a good financial plan before beginning the search. Also, foundations are reluctant to support a project for an indefinite period of time. They must be informed of the long-term goals of the project, including future sources of funding.

The Massachusetts Department of Public Health's Division of Preventive Medicine can lend assistance in obtaining funding from other sources, writing grants and providing support in setting up programs. They are currently compiling educational materials on funding resources.

Seeking Federal Money

Eighty percent of all grant monies are awarded by the federal government. Most of these grants require "matching shares," usually representing a small percentage of the total project budget initially, with an increasing proportion of costs being assumed by the project over time. See below, "Procedure for Obtaining Federal Funding."

Suggestions for Proposals

Direct contact with federal officials may increase chance of success. Write a letter of inquiry to your regional agency similar to the one presented in the appendix.

Chance of success will also be enhanced if the proposal is well-developed and well-written. Some sources to help are:

1. *Developing Skills in Proposal Writing* by Mary Hall, at Boston Public Library.
2. *Successful Foundation Presentations* by Joseph Dermer.
3. *Program Planning and Proposal Writing* from the **Grantsmanship Center**, available at the Associated Foundation of Greater Boston.

Also, large cities often have a person who is in charge of writing grants. It may be worthwhile to get advice from him or her.

Bibliography of Resources for Out-Of-State Foundations

1. *The Foundation Directory* — found in public libraries.
2. *The Foundation Center Source Book* — profiles of 500 large foundations each of which awards over \$200,000 to recipient organizations each year. Includes program descriptions and a list of recent grants.
3. *Foundation Grants Index* — includes information on grant authorizations and descriptions.

Bibliography of Resources of In-State Foundations

1. The Massachusetts Attorney General's Office publishes a list of foundations which are registered with the Division of Public Charities and which make discretionary loans, grants, or donations for charitable purposes.
2. Associated Foundation of Greater Boston, 294 Washington Street, Suite 501, Boston, MA. Non-profit organization which provides staff support services to private sector charitable grantmakers and maintains a library as a public service to grant seekers.
3. *The Community Resource Catalog; A Directory of Philanthropic Foundations in the Commonwealth of Massachusetts* by Steve Rubin is available for \$10.00 from Government Research Publications, P.O. BOX 122, Newton Center, MA. 02159.

PROCEDURES FOR OBTAINING FEDERAL FUNDING

The first step in finding available money is to make a list of units within federal agencies which have made grants to projects similar to yours, or that have expressed an interest in funding projects in your program area. The initial research tool is the *Catalog of Federal Domestic Assistance*. Most large libraries have a copy.

Once you have found an agency that looks promising, the following information must be obtained:

1. correct name of agency and program
2. priorities of agency for use of their money
3. amount available for new grants
4. regulations
5. proposal format required
6. application deadline
7. purpose of legislation under which program is authorized
8. average size of grants approved
9. matching requirements
10. fund restrictions
11. name of state agency to be consulted.

In addition, the Federal Assistance Programs Retrieval Systems (FAPRS) is a computerized shortcut system that can quickly find the programs in a category or subcategory for which an applicant is eligible. In Massachusetts, you may contact:

Community Resource Development Program
Department of Food and Resource Economics
University of Massachusetts
Amherst, Massachusetts 01003
(413) 545-2496

Several government circulars are also relevant to local health departments and are useful because they are referred to frequently in the *Catalog of Domestic Assistance*. The following copies may be ordered free from:

Publications Office
Office of Management and Budget
726 Jackson Place, N.W.
Washington, D.C. 20503

1. OMB Circular A-95: Evaluation, Review, and Coordination of Federal and Federally Assisted Programs and Projects.
2. OMB Circular A-111; Jointly Funded Assistance to State and Local Governments and Non-profit Organizations.
3. FMC 74-7: Uniform Administrative Requirements for Grants-in-Aid to State and Local Governments.
4. FMC 74-4: Cost Principles Applicable to Grants and Contracts with State and Local Governments.

STATE AND AREA HEALTH PLANNING ACTIVITIES

The development of Commonwealth-supported health planning activities began during the mid-nineteenth century. Comprehensive health planning has long been recognized in Massachusetts as a process by which specific public health programs can be identified and assessed and possible solutions advanced. Improvements in the health status of Massachusetts residents during the past century have often reflected success in planning and coordinating major state and local public health programs.

The National Health Planning and Resources Development Act of 1974 (P.L. 93-641) established a federal-funded system of national, state and area health planning agencies. Congress voted in October, 1979 (P.L. 96-79) to revise and continue the federal-supported health planning program. Health planning agencies have been charged with a variety of health-related responsibilities, including the collection, analysis and publication of health status and environmental data within the context of area and state health plans. Planning agencies are required to identify and assess health problems and available health service resources. Health Planning agencies are precluded by law from becoming direct providers of health care services.

Massachusetts communities are represented by six Health Systems Agencies (HSAs) responsible for area health planning. Each municipality is included in an HSA. The Statewide Health Coordinating Council (SHCC) is charged with addressing state health concerns. The Office of State Health Planning (OSHP) provides staff support in state health planning. The first Massachusetts state health plan was approved by the SHCC March 20, 1979.

Health planning agencies have authority in several areas of program and institutional development. HSAs are involved in both Determination of Need (DoN) and Appropriateness Review (AR) activities. Health planning agency involvement in reviewing proposed uses of federal funds for health-related projects is of particular concern to local health departments. Table I in appendix II(4) indicates the federal-funded programs (January, 1980) which require applicants for funding to consult with area or state health planners during the early stages of proposal development. It is expected that this list of federal programs subject to health planning agency review will be revised and expanded in the future. Applicants for federal health-related funds should consult with federal project officers and state or area health planning agencies to determine if HSA or SHCC review procedures apply in project development. See also the 8/10/79 *Federal Register* for additional information on program review.

The process of state and area health planning is important to local health departments for several reasons.

First, the area and state health plans, which are widely distributed and subject to public review and comment, are designed as guides to understanding a wide range of health problems and health service resources. The State Health Plan (SHP) is approved and signed by the Governor and often referred to as an important policy document. It is important that the special concerns of local health departments — e.g., local environmental concerns, issues in consumer health education, child and maternal health — be recognized. It is equally important that the special role and needs of local health departments in providing necessary health care services be adequately presented.

Individuals may also wish to consider serving on the SHCC and area health planning councils as consumer or professional representatives. Information on SHCC and area council membership is available from the agency directors identified in appendix II(4). Individuals who wish to identify the HSA serving their area should contact the Office of State Health Planning; telephone (617) 727-4164.

Second, local health departments involved in the development of federal-funded projects should be particularly concerned with HSA and SHCC program review procedures. Programs subject to planning agency review are identified in appendix II(4).

Last, local health departments should take advantage of health planning agencies as program resources. Planning agencies can serve as sources of local demographic, epidemiological, and environmental data. Some agencies have provided technical or advocacy support in the development of local health projects. Planning agencies can often provide valuable information on the development and funding of state and national health programs

Individuals may also wish to consider serving on the SHCC and area health planning councils as consumer or professional representatives. Information on SHCC and area council membership is available from the agency directors identified in Table III. Individuals who wish to identify the HSA serving their area should contact the Office of State Health Planning, Telephone (617) 727-4164

See Appendix II(4) for:

1. Massachusetts resource centers
2. Sources of community information
3. Federal programs subject to health planning agency review
4. Massachusetts health systems agencies
5. Sample letter of inquiry to a federal funding agency

CHAPTER 4.

CHAPTER 4. Program Planning

- Board of Health Responsibilities
- Rationale
- Determining Needs of the Community
- Analyzing Financial and Staff Resources
- Setting Goals and Objectives
- Strategies and Budgets
- Interactions with other Agencies and
Town Bodies
- Evaluating Program Services and Staff
- State and Area Health Planning Activities

CHAPTER 5

RECORD-KEEPING, REPORTING AND OTHER DATA MANAGEMENT RESPONSIBILITIES

BOARD OF HEALTH RESPONSIBILITIES

1. **Maintain standard records**, and retain them for their minimum legal retention period, as specified in the Massachusetts General Laws and Code of Massachusetts Regulations. The board may retain any records beyond this minimum time at its discretion, or may request authorization to destroy records that have been held the full required time by writing to:

Supervisor
Division of Public Records
17th Floor McCormack Building
One Ashburton Place
Boston, MA 02108
(Telephone (617) 727-2382)

See below the Board of Health Disposition Schedule (Schedule DS-7-77) which lists standard records, statutory reference, retention period, and instructions for requesting permission to destroy records. Refer to the relevant statutory code or regulation for detailed information on what must be included in each record.

Records that must be kept permanently include:

- a. Meeting records, which should include
 - i. approved minutes of all meetings
 - ii. assignment of places for sanitary landfill, transfer stations, hazardous waste disposal
 - iii. subdivision plans: preliminary notice of approval/disapproval and report of decision to the planning board (M.G.L. 41:81U & 81S)
 - iv. approval of public cemeteries, including plans
 - v. assignment of places for noisome trades, including plan with a letter and map
 - vi. approval of operation of slaughterhouse
- b. Record of licenses and permits issued
- c. Rules and regulations (M.G.L. 111:31 et passim)
- d. Communicable disease information, which should include
 - i. records of communicable disease cases (ledger) (M.G.L. 111:113)
 - ii. record of notice of carcasses infected with communicable disease (M.G.L. 129:28)
 - iii. record of notice of communicable disease among animals (M.G.L. 129:28)
 - iv. reports of deaths from communicable diseases (M.G.L. 111:29)
- e. Records of the milk inspector (M.G.L. 94:5)
- f. Plans for sanitary landfill
- g. Inspection report records of subsurface sewage disposal system (keep until new system is installed) (Title 5, Environmental Code).

2. **Receive reports, notify MDPH and take other appropriate action** regarding
 - a. cases of diseases dangerous to the public health, and deaths from such diseases (M.G.L. 111:29, 112)
 - b. infants prematurely born (M.G.L. 111:67A)
 - c. persons who may be afflicted with cerebral palsy (M.G.L. 111:111A)
 - d. persons who have certain other diseases monitored by MDPH (food-borne diseases, water-borne diseases, Reyes syndrome, etc.)

(See Chapter 20 below, Communicable Diseases [M.G.L. 111:110] and Chapter 23, Maternal and Child Care.)
3. **Process death certificates** (M.G.L. 46:11); see Chapter 19 below on board responsibilities regarding cemetery and burial permits.
4. **Send duplicate copies** of certain licenses and permits granted, as required in the Massachusetts General Laws and in regulations, to the state agency responsible for regulation (e.g., MDPH for food service establishment permits; DEQE for recreational camps, etc.).
5. **Submit proposed local regulations** regarding food purity and quality to MDPH Division of Food and Drugs, and other proposed regulations to appropriate regulatory agency **if** required by law, or if desired by board of health. Check the enabling or applicable general law or regulations for certainty regarding such prerequisites. Other local rules or regulations that must be reviewed by MDPH or DEQE include
 - a. regulations affecting use and handling of sources of ionizing radiation
 - b. regulations relating to air pollution control
 - c. regulations regarding special waste management and disposal.
6. City boards of health must **make an annual full and comprehensive report** to the City Council of the board's acts during the preceding year and the sanitary condition of the city (M.G.L. 111:28). Town boards of health will often make an annual report as well, to distribute before or at town meeting, or to be incorporated in the town report.
7. **Keep cash book, record of expenses and income** until a state or other official audit is completed. Keep summary information as needed for budget analysis.
8. If certified as a home health agency, **maintain information and medical records** as required, and keep adequate daily, weekly, monthly and case statistics as necessary for reporting purposes.

BOARD OF HEALTH RECOMMENDED DUTIES

1. Maintain vital statistics, health status indicators, and town-sponsored service delivery/utilization records permanently and in such a way that they may be readily available for use.
2. Compile annually significant statistical information for program planning and evaluation, and for use by interested citizens and agencies.

3. If providing school health service, or community clinic services, maintain medical records and establish methods for preparing statistical summaries of services provided at least by month and year.
4. Analyze or assist in the evaluation of morbidity and mortality data obtained from reports of communicable diseases, births and deaths, clinics, nursing services, and school health services. Whenever possible, identify and request copies of summaries and analyses prepared by MDPH, DEQE, health systems agencies, and other organizations.

TOWN CLERK RESPONSIBILITIES*

1. Keep records of all births, marriages, and deaths of town residents (M.G.L. 46:1-2); transmit copies of such records to town of residence of parents of a newborn or of the deceased, as required by M.G.L. 46:12.
2. File daily with the local board of health a list of all births reported to him/her, showing for each the date of birth, sex, color, birth weight, family name, residence and physician or officer in charge (M.G.L. 46:4A).

PHYSICIAN RESPONSIBILITIES*

1. File with town clerk a report on standard forms of any birth or death attended by the physician unless mother and child were admitted to a hospital for postnatal care immediately after birth (M.G.L. 46:3B).
2. Keep record of the birth of all children, in cases when she/he was in charge (M.G.L. 111:67E).
3. File report with MDPH regarding children born with congenital deformities (M.G.L. 111:67E).
4. Report cases of diseases dangerous to the public health and certain other diseases to the board of health or MDPH (see Chapter 20, Communicable Diseases) to the board of health of the town where the patient resides.
5. Report cases of certain sexually transmissible diseases to MDPH.
6. Report births of infants prematurely born (if born in a place other than a hospital) as soon as possible to the board of health of the town where the mother resides. If mother is unwed, report directly to MDPH (M.G.L. 111:67A).

CLINIC, HOSPITAL RESPONSIBILITIES*

1. Report to town clerk all births occurring in the facility, or births of infants admitted for postnatal care (M.G.L. 46:3A).
2. Retain medical records for 30 years (minimum) from last date of treatment of a patient.
3. Report eye problems of newborns and other reportable diseases to the board of health of the town in which the patient resides.
4. Report births of infants prematurely born (less than 5½ lbs. at birth) to board of health where mother resides; if mother is unwed, report directly to MDPH (M.G.L. 111:67A).

* Responsibilities listed here are only those of particular concern to boards of health, having to do with reporting of births and deaths; premature births, and communicable diseases.

RATIONALE

Introduction

"Data, in the form of vital statistics, health status indicators, and activities of the Health Department staff, are the first indispensable component in the operational functions of a health department. Without a solid data collection and reporting system, needs cannot be identified, priorities and goals and objectives cannot be set, and no evaluation or monitoring is possible."*

Statistics are basic information tools. Well-organized, meaningful statistics can help the local health department or board

1. identify health needs and problem areas
2. monitor and evaluate existing programs
3. determine the amount of service necessary
4. justify changes in existing programs or initiation of new ones.

Care should be used in data collection and analysis to choose information that is expected to be useful in answering specific questions.

Program planning should be based, in part, on data analysis. For example, well-baby clinics should be located in areas where babies live. A growing percentage of elderly people in the community often indicates an increased need for home health services and clinical services. An outbreak of food poisoning may signal the need for more intensive surveillance of restaurants or better education of food handlers. Special immunization clinics should be offered if an outbreak of communicable disease occurs, or if school records indicate incomplete immunizations of children. An increased venereal disease rate should lead to more educational programs.

Responsive and effective public health programs cannot be planned, implemented, monitored, or evaluated without a solid and **appropriate** data base. To rationalize expenditures, it is essential to know how many persons need a particular program or how much benefit is being derived from that program. Also, availability of well-organized data is necessary to apply for federal funding of special programs.

Collection and Reporting

Data management includes the collection of three types of statistics

1. **vital statistics** — records of births, marriages, and deaths
2. **health status indicators** — measures which assess the relative health of a population. Measures of morbidity (episodes of illness or disability) and low birth weight are commonly used to assess health status.
3. **health service and program statistics** — records of program utilization and availability: amount of services available, number of medical procedures performed, number of clinic visits, number of people served, number of inspections, etc.

Demographic Data

Population and economic status data provide important background information on health resource needs. An expanding population base usually means demands for health services and enforcement will grow accordingly. With a denser population, such environmental concerns as sewage and refuse disposal become critical. Economic status indicators (e.g., per capita income, percent of population below poverty level) are another demographic gauge of service demand. A low-income population has particular need for screening and nursing service. Likewise, dilapidated housing creates a demand for frequent housing inspections. Together with health-related statistics, demographic data give the planner a more comprehensive picture of the community's health needs.

* Springfield Blue Ribbon Commission Report, 1979.

Types of Vital and Health Status Statistics and Suggested Use

Type of Information	Selected Use
Mortality statistics (from death certificate)	Assess leading causes of death in the community and develop programs to prevent disease and alleviate suffering.
Age-specific death rate	Indicates which age groups a particular program should address.
Infant mortality rate	Traditionally considered to be an accurate indicator of unmet health needs and adverse environmental/social conditions: nutrition, medical care, sanitation, health education. Assesses quality of infant and maternal health services or needs for more services.
Morbidity statistics	Assess adequacy of environmental control programs (food and water quality); evaluate adequacy of immunization efforts; indicate areas of concern re: occupational and domestic health hazards, etc.
Crude birth rate	Indicates need for child and maternal health services.
Age-specific birth rate	Indicates need for family planning services (e.g., large percentage of teenage mothers).
Rates of drug and alcohol use	Assess need for expanded programs, rationale for expenditures. Need for better health education in schools.
Measures of disability (restricted activity days, work loss, bed-disability)	Assess need for home health services, supportive services, and occupational health program.

Gathering Statistics

- Level 1: Each board of health receives data on births, deaths, and communicable diseases in its community. Records of births and deaths can be kept in the town clerk's office, but are readily available for analysis. Statistical information on births, deaths, and dangerous diseases in other parts of Massachusetts is available from the regional HSA or MDPH Division of Health Statistics and Research. Demographic data (population size, per capita income) are also readily available from these sources. In this manner, town-to-town or town-to-state comparisons can be made.
- Level 2: Each board of health should keep minimum program statistics on its own services: inspections, nursing services, clinics, hearings, notices of violations, etc. (see Appendix). These records serve as a monitoring device, keeping track of the quantity of service output. Such statistics should always be related to the number of units involved, e.g., number of inspections should be related to the number of restaurants, houses, etc., involved, and related to the total number of units that are eligible for inspection. Clinic visits and home visits should always be related to number of **patients** served.
- Level 3: More sophisticated program development involves assessing health service needs as well as comparing service delivery and utilization of other towns. Health service and program statistics can be obtained from the following sources:
- Division of Health Statistics and Research (MDPH)
 - Health Systems Agency
 - Local hospital, clinic and voluntary agencies' statistics
 - Local studies (universities, private foundations, consultants)
 - School health records.

Information from other health providers, based on their program statistics or on their assessment of community needs, can help the planner/evaluator to

1. assess the community's most important health problems
2. ascertain how well other local agencies are meeting the community's health needs
3. provide a reference point for evaluating the town's own services.

Before seeking data from outside or other community sources, the administrator or board of health should decide exactly what information it wishes to obtain and what use the information will be to its planning efforts. Collection of irrelevant data is a waste of time for both the investigators and for those who have to provide the data.

Presentation of data. The objective of data reporting is to present statistical information in a clear and meaningful fashion.

1. Label all graphs and tables clearly (what, where, when).
2. Standardize categories (well-defined) and make them mutually exclusive so that everyone interprets the data in the same fashion.
3. Accompany charts, tables, and graphs with a brief written analysis.
4. Use rates (e.g., cases per 1000 population) so comparisons can be made.
5. Compare figures to those for previous years to indicate trends.

In general, data should be presented in a manner that will let the planner know how well departmental activities relate to the health service needs of the community. For example, it is not sufficient to indicate the number of referrals made at a well-baby clinic. Thorough follow-up data are needed. It also helps to know the number of people who would benefit from a well-baby clinic to get an idea of what percentage of the target population is being served.

Planning with Statistics

All three forms of data — vital statistics, health status indicators, and health service statistics — can be used for program planning and evaluation. **The key to rational and effective use of resources is appropriately interpreted statistical information.** Here are some rough guidelines:

1. **Are the data from a reliable source?** The method of collecting data may have been so haphazard as to render the information useless. This is particularly true if categories are not well defined nor mutually exclusive.
2. **Do the data represent a significant trend,** or could the results be due to random variation? For example, a 50 percent drop in measles cases in one year does not necessarily indicate a successful vaccination effort. A steady decline in measles cases over a five-year period would be more significant.
3. **Are the comparisons meaningful?** Most health-related statistics vary greatly by age and sex. Thus, comparing a town with a very young population to one with an older population is very misleading unless the data are broken down by age category. Epidemiologists often use **expected** versus **actual** cases or deaths to measure whether an area has an unusually high rate of death or disease. In addition, both rates and raw numbers should be examined. Rates allow the analyst to compare the relative seriousness of health problems in towns of different size populations. Raw numbers indicate the **seriousness** of the matter. (A report could announce that town Y has three times as many cases of food poisoning as town X. However, if town Y had three cases and town X had one, the finding would not be very significant).
4. **Are the results due to biases in collecting the data?** Data may be accurately recorded, but still be misleading. For example, using hospital data to assess health needs may cause one to miss less serious diseases that are likely to be treated in clinics or private offices. Moreover, a health survey should include data from all segments of the population, not merely those who may be reached by telephone.
5. **Are important population characteristics taken into account?** The **breakdown** of data by age, race, sex, geographic location, and economic status often yields important information on effective service delivery. The planner must know **who** should be receiving services and **where** services are to be delivered. Of course, there are limits to the interpretation of statistical data, because of its **quantitative** nature. Quantitative information should be used in conjunction with knowledge based on experience. For example, statistics can indicate how well or poorly a particular screening program is being used. The reasons for this utilization pattern, however, may require more intensive knowledge about the target population.

Formal or informal surveys or interviews may be appropriate methods for learning about particular problems. The health impact of a particular service must also be taken into account. For example, a high incidence of a certain disease does not automatically mean screening programs should be initiated. Some diseases lend themselves to screening better than do others. Hypertension is a very **screenable** condition; it is widely prevalent in the general population, easy to detect, and once discovered, responds well to treatment. Lung cancer, on the other hand, is not very screenable; it is much less prevalent, detection procedures are expensive, and treatment efforts are usually unsuccessful. Thus, even if intensive screening is initiated, it is of little use. Educational efforts may be more appropriate.

The end result of successful data management should be well-planned programs and services that address the health needs of the community. A second important outcome is the ability to justify public expenditures for local programs.

Analysis

Useful information is usually obtained by the **comparison** of health-related data. For example, the death rate in a community is found to be 9.5 deaths per 1000 inhabitants. Is this cause for alarm? At this point, comparisons must be made with mortality rates of other communities with similar population characteristics. In addition, comparisons are made between different age groups within the community. Calculation of age-specific mortality rates, for example, may show a much higher than average rate of death for infants under the age of one year. Further analysis within this age group might reflect a large number of infants born prematurely who needed more pre- and postnatal care.

State Resources

The Office of Health Statistics of MDPH, Registry of Vital Statistics (One Ashburton Place, McCormack Building, Boston, Mass. 02108), has computerized data files on the following:

- deaths (and causes of death)
- births
- health facility* utilization, i.e., services offered, capacity, medical procedures performed.

Upon request, Office of Health Statistics personnel will compile and analyze computerized information for a specific town and can advise a board of health on the relative importance of their findings. In general, the reporting of mortality and birth statistics has been complete and continuous and the resulting statistics can be used with confidence. The reporting of health facility use, however, has been sporadic and less uniform; the resulting statistics may be much less useful (for example, records of caesarean sections are available for only selected years). Morbidity statistics are available only for diseases dangerous to the public health.

* Hospitals, long-term facilities, ambulatory care facilities, home health agencies, residential care facilities.

CHAPTER 5.

CHAPTER 5. Record-Keeping, Reporting and Other Data Management Responsibilities

Summary of Responsibilities:
Board of Health, Physician,
Town Clerk, Clinic/Hospital
Rationale

CHAPTER 6

OUTREACH AND EDUCATION

Publicity and community outreach are key components of successful program implementation. Boards of health and health departments often suffer from a lack of community recognition, especially because much of their work is preventive — the more successful they are in protecting the community's health, the more they may be taken for granted. If the community at large is not aware of board of health activities, existing programs may be underutilized and support may be weak for their continued funding or for the introduction of additional projects. To improve this situation, three goals should be addressed:

- A. Building **community support** (particularly among interest groups, town officials and local media) for local funding of existing and proposed services
- B. Promoting community **awareness** of available services
- C. **Developing**, either alone or with other agencies, programs that attempt to prevent or control health problems before they cause serious disease or disability.

A. COMMUNITY SUPPORT

With the advent of austerity budgets, the health department must compete for scarce funds. Public health problems are often less visible than other community concerns such as fires, potholes, burglaries, and deteriorating public parks. Health departments must be able to document and publicize community health needs in order to mobilize community resources and justify requests for public funding.

Documentation: A starting point for gaining community support for public health services is the collection, analysis, and reporting of statistical information (see Chapter 5). Data that indicate a need for public health services can be presented in an annual report or issued in special reports.

Public hearings can serve either as a forum for community members to express health needs or as a publicity vehicle. Ad hoc or special committees can produce fact-finding reports. Involving concerned community members in assessing health needs helps to create support for health services.

Networking: In addition to providing documentation of need, building support for a program involves publicizing the issues and contacting community groups with an interest in health problems. This necessitates a good deal of personal interaction as well as an ability to state the case in straightforward, convincing manner. Well-presented data can help immensely in this respect. Groups already familiar with a health need require less convincing and their support should be sought first. Many groups welcome outside speakers and will be supportive if presented with an argument geared to their interests and philosophy. The goal is to build a **broad** support base; try not to confine your efforts to a few groups.

Using the media to gain community support: Once a health need has been identified and initial support has been built, it is necessary to let the decisionmakers and other groups know that a problem exists and that town voters are concerned about the problem. The media are crucial publicity tools. Cultivating personal contacts with local reporters and managing editors can help prevent news releases and press conferences from being lost in the shuffle. A sympathetic reporter can write feature stories and help gain coverage for public hearings, special reports, committee findings, budget hearings, and programs.

Writing a News Release

1. Be sure your most important facts (who, what, when, where, why, how) are included in the first two paragraphs. Keep these short (under 30 words).
2. Make it interesting. Think of an unusual "angle" for the first sentence. Consider using quotes, dramatic statements, dialogues, and paraphrases as openings.
3. Type and double space all releases.
4. Type on only one side of the paper. Use regular-sized typing paper.
5. The writer's name, "Community Education," the business phone number, and the release date should appear in the top right-hand corner of the first page. A few key words describing the story's content should appear in the top left-hand corner.
6. If the story contains more than one page, "more" should be placed at the bottom of the first page. "Add to #1," and so on, should be written on the top of the following pages.
Put "30," "end," or "###" at the end of the story.
7. Begin the story about four inches from the top of the page. This space will allow the newspaper room for printing instructions.
8. Do not write a headline on the story.
9. Send out originals to the media; keep a carbon copy for filing purposes. Never send the same release to every medium unless the editor knows that the others are getting the same release.
10. Release accurate news without errors. Check the spelling of all names.
11. Meet the deadline, ahead of time, if possible.
12. Make releases short; they usually cover one or two pages.
13. Do not hyphenate words at the end of a line, and do not split paragraphs between pages. Often one story will be given to two different typesetters if it is longer than one page. Paragraphs should also end on the same page where they begin.
14. Use short and simple words, avoid abbreviations and jargon.
15. Give exact dates in the story; do not use yesterday, tomorrow, or next week. These terms may confuse the reader or editor.
16. Give the address of the place where an activity is being held in case some community members do not know where it is.
17. Use adjectives sparsely. Do not overemphasize the "goodness" of the community education process; let the concept speak for itself.
18. Spell out numbers from one to ten and use figures from "11" on up.
19. If the news being released is not interesting, do not send it to the newspaper just to have something to send. If the story appeals to a special group, relate that story to the group.

Note: Each day, an average newspaper receives over 200 press releases. The less rewriting and editing that needs to be done, the better a chance one has to be printed. The newspaper editor may be consulted about the paper's preference concerning writing style.

Source: "A Public Relations Handbook," Diane Russell (Pendell Publishing Co., Midland, Michigan, 1977.) (copyright permission granted to editor/author 11/21/79).

When the board needs to undertake a publicity effort it may be helpful to follow these suggestions:

1. Prepare press kits for news conferences. In addition to a press release, this kit may include background materials on the issue, previous newspaper articles, a short fact sheet, statements by prominent community figures, and photographs.
2. Maintain good relations with the city editor. Ask for suggestions regarding new approaches, feature stories and picture possibilities.
3. In addition to submitting news stories and features, send information to columnists. Columns are often read more carefully than news stories.
4. Enlist the aid of community-opinion leaders to make supportive statements for radio and TV public service announcements. Find out if the stations will provide technical assistance or if local schools with media equipment can help.
5. Keep in touch with radio program directors and news directors. Radio stations have a limited but specialized listening audience and can offer frequent repetition of announcements. Like newspapers, radio stations can be supplied with fact sheets and editorial comments.
6. Utilize attention-getting devices other than newspapers, radio, and TV. Outdoor billboards, banners, posters, leaflets, and bumper stickers distributed through community groups can help to publicize current issues. If any ethnic or cultural groups are part of the target population, be sure that their languages are used and particular interests or concerns are addressed.

Publicity Strategies: Informal, personal discussions with elected officials and community leaders should be ongoing. Formal presentations or reports to selectmen, council members, finance committees, or other town/city groups can be very effective. Other opportunities for high visibility in the community include press conferences, public hearings, panel discussions, presentations to interested groups, budget hearings, printed notices, and community displays.

The timing of a strategy is important. Displays, press conferences, and panel discussions can be used to alert the community and to educate citizens about issues or programs. If support is growing, public hearings can be initiated. Any action that calls for visible support should be carefully planned. A public hearing at which no one shows up can be very embarrassing!

Direct, personal outreach is important. Building solid community support should not rely totally on media publicity. It is a long-term process of being open to community input, documenting health needs, keeping in touch with other elected officials and community leaders, building coalitions with health providers, and maintaining good relations with consumers.

B. COMMUNITY AWARENESS OF EXISTING SERVICES

One problem faced by any group providing services to the public is letting the public know that services exist. Community need for a particular service may be well documented; however, this does not guarantee that people will use the program. Non-profit organizations often view public relations (PR) as a distasteful chore, not a necessity. "Many groups find out all too late that no matter how good the program, it is nothing if the public doesn't hear about it (it is like a present that never gets opened)."

The following should be considered strategies for publicizing existing services:

1. Publish a brochure which lists available health department services in an easily readable format and distribute this material via community groups and common meeting areas (See sample Brochure, Appendix B.) Use Spanish, Portuguese, or other languages as needed, and communicate with various cultural groups in the community.

2. Produce leaflets or posters advertising services and distribute them in areas where target groups might become aware of them.
3. Produce and/or distribute public service announcements (PSA's) to TV, radio, and press. Use the media that will best reach your intended audience. A publicity effort aimed at one subgroup should determine which type of media they are most influenced by and when they tune in to that medium.
4. Talk to community groups about relevant health department activities. Groups with higher-than-average rates of death and disease should be given top priority. Don't wait for an invitation!
5. Set up displays and exhibits at community functions.

Producing an Outreach Brochure: A brochure is primarily intended to inform town residents about existing health department services. It can also define public health activities for the public and thus broaden the community's view of a health department's functions. Print it in translation as necessary.

The brochure should be short, simple, and easy to refer to. The appendix contains reproduction of a brochure distributed by the Peoria, Illinois Health Department. (Note that it can be folded in thirds to produce a small, easily handled piece of literature.) A more extensive brochure can include the following:

- * name of service
- * brief description of service
- * whom to contact at health department office or state
- * list of fees
- * general responsibilities of board or department
- * request for citizen input.

All of the above activities should be carefully planned. With limited time, personnel, and money, it is important to select a publicity strategy that will reach and influence the intended audience. The process is quite similar to program planning:

- a. Analyze problems and questions.
 - What do we want to accomplish by our publicity effort?
 - Whom do we want to reach? (Everyone? Selected groups?)
 - Why doesn't the community already know about our activities?
 - What is our public image now?
- b. Brainstorm goals and objectives to answer these questions.
- c. Create strategies to reach the intended audience (see accompanying checklist).
- d. Develop pre-testing procedures for your intended audience.
 - This is a crucial step which is often overlooked when developing medium strategies. At the very least, have a few people from the target group review the materials and then ask them to tell you the message **they** get from the material. Enlisting citizens from the target group to help design strategies may be an even better approach.

For certain programs, more formal outreach efforts may be initiated. This can involve contacting interested groups and agencies and setting up protocols for referring people to your program. This activity also serves as a check to make sure your program is not duplicating existing community services.

Checklist of Questions for Material Design

Different groups of people respond to different languages and visual images. Advertisers spend thousands of dollars annually to research which types of messages will have the greatest impact on a particular audience. Good community input into programs can be an effective substitute for this type of research. Outreach strategies which answer the following questions should have a good chance for success:²

- a. To whom am I speaking?
- b. What are their needs and how will the information I want to give them affect those needs?
- c. What is the life-experience background of my audience?
- d. What kinds of information does this group need to take action, make a decision, or participate in a program?
- e. How will the intended audience benefit from this program?
- f. What are reasonable expectations to raise?
- g. What are the phrases, metaphors, pictures, and media formats that will relate best to my audience?

Case-finding and Referral

Depending upon the goals of the program, and nature of the health problem and of the affected population, a health program may require an effort to locate the people who need treatment or other services. The best approach may be to combine direct case-finding (conducting surveys door-to-door, home-visiting holding screening clinics, inspecting buildings for lead paint or other hazards of particular concern) and requesting referrals from health service providers, school personnel, or other human service agencies. Screening efforts should be directed as much as possible toward the population actually "at risk" for a particular problem.

If a board of health wants providers or others to **refer** people likely to need its services, the board or its staff must make clear to those providers or agencies the nature of the services available, the population it wants to reach, and what information should be included with the referral. A simple "referral form" may be desirable. Frequent reminders or publicity, or direct communication between board of health staff and people who should be making referrals may help ensure appropriate referrals.

C. EDUCATIONAL PROGRAM DEVELOPMENT

Health education is the use of a promotional strategy on a local level. Any program intended to help community members make informed health decisions, develop more positive health-related attitudes, or adopt more health behaviors can be labelled "health education."³ Although media campaigns can help make people **aware** of an issue, they rarely **persuade** someone to adopt a new behavior. Changing habits and life styles is usually a long process influenced by many factors (peer group pressures, family support, self-image, legislative changes, media messages, social trends, etc.).

Technical aid to community health health promotion programs is available through the Regional Health Office. Several state agencies put out requests for proposals (RFP's) as a means of distributing federal dollars to appropriate programs. Regional offices may have a health educator on staff to assist communities which desire to obtain outside funding.

Personal Lifestyles: The Massachusetts Department of Public Health has given special attention to health effects of personal lifestyles. A 1977 MDPH publication states, "In view of the considerable body of evidence linking life-styles to death and disability, the Department will give a high priority to the development of more cost-effective preventive programs dealing with hazardous individual behavior." The following areas were identified as having a significant impact on an individual's health status:

- a. quality of nutrition and diet
- b. level of physical activity
- c. use of hazardous substances (alcohol, cigarettes, and other drugs)
- d. accidents.

Of course, changes in personal lifestyle are not enough to ensure a community's good health. Environmental contaminants and stressful living conditions can contribute greatly to ill health. For this reason, educational activities should also be directed towards external sources. (One city health department recently sponsored a food service sanitation course for restaurant owners and food service managers developed in cooperation with local adult education and community college personnel.)

Program Development: Resources can be a major stumbling block. Local health departments can seldom afford to hire additional staff to develop health education programs. Thus strong community support is essential to provide input on educational needs and to provide resources — technical assistance, staff support, and support for increased budgets.

Health education seeks to facilitate voluntary behavior change while the purpose of public relations is to increase consumer support and understanding. To encourage change, two-way communications should be used. Rarely do people change their behavior merely because someone tells them a behavior is wrong or harmful. The decision to use an educational program (whether developed by your department or another agency) should take the educational **process** into account. To facilitate interaction and active participation, the method of presentation should:

- a. provide information in a manner that encourages the consumer to examine and discuss his/her own health beliefs, values, and behaviors.
- b. provide opportunities for consumers to exercise decision-making skills.
- c. provide opportunities for interested individuals or groups to enquire further about sound health practices.
- d. allow consumers to assess their own use of existing health services.

The guiding philosophy is to focus on the learner, i.e., to ask "what has this information to do with you, your life, your values, your actions?"

Many private and public health-related agencies have staff with educational planning expertise. Their assistance should be utilized whenever possible so that health education activities can be offered through health departments who might not have funds to support a health educator.

See Appendix II(6) for: 1. Media Strategy Chart and 2. Sample Brochure.

CHAPTER 6.

CHAPTER 6. Outreach and Education

Gaining Public Support
Promoting Community Awareness
Prevention via Education

CHAPTER 7

SEWAGE DISPOSAL

BOARD OF HEALTH RESPONSIBILITIES

1. **Review preliminary and definitive plans for subdivision** of land (M.G.L. 41:81 S-V) (See Protocol I below).
2. **Examine the site** where a sewage disposal system may be installed, taking care to make correct interpretations of soil qualities and ground water characteristics.
 - a. determine if the size of the lot is compatible with the proposed sewage disposal system and if location is consistent with state regulations as outlined in 310 CMR 15.03(7) and 310 CMR 15.02(5).
 - b. witness and record deep observation holes to check soil conditions and water table.
 - c. witness and record percolation tests.

(State Environmental Code 310 CMR 15.03, Title 5, Minimum Requirements for the Subsurface Disposal of Sanitary Sewage).

3. **Consider and act upon applications for Disposal Works Construction Permits** for the construction, alteration, repair, or installation of individual sewage disposal systems (ISDS) expected to handle a maximum of 15,000 gallons/day, and not involving industrial wastes. An applicant must include a plan of sewage disposal including all information required by Title 5 of the Environmental Code. (The Dept. of Environmental Quality Engineering [DEQE] must handle larger sewage disposal systems, any ISDS in a mobile home park, and any disposal involving industrial wastes.) (310 CMR 15.00, 15.02).

The necessary steps include the following:

- a. consider the results of site inspection, the expected amount of sewage to be handled per day, and the accessibility of common sanitary sewer hook-up (310 CMR 15.02, 15.03).
 - b. if the site inspection results are satisfactory and other above-mentioned criteria are met, approve the site plan and grant Disposal Works Construction Permit, with specifications or conditions, if necessary.
4. **Inspect the construction of an ISDS** or require inspection by the designer and require the inspector to certify in writing that all work has been completed in accordance with the terms in the "Disposal Works Construction Permit," the approved site plan, and the regulations specified in Title 5 of the Environmental Code (310 CMR 15.02[8]).
5. Upon receiving such written certification from the designer or the board, **Issue a Certificate of Compliance** to the permit holder (310 CMR 15.02[8]).
6. **Consider and act upon applications (renewed annually) for Disposal Works Installer Permits**, which are required for any person or firm engaged in the construction, alteration, installation or repair of any ISDS (310 CMR 15.02[2]).

7. **Ensure proper handling and disposal of septage:**

- a. grant Septage Handlers Permit, annually, to any person or firm engaged in the pumping or transport of the contents of individual sewage disposal systems, and report such permits to the regional office of DEQE at the beginning of each calendar year (310 CMR 15.02[3]). (Request advice from DEQE regarding criteria to apply in evaluating septage handlers.)
 - b. inspect and approve equipment used in removal and transportation of septage (310 CMR 15.19[2]).
 - c. approve the disposal site for septage pumped from individual sewage systems (310 CMR 15.19[3]). DEQE must also give written approval for the site and approve the method of disposal.
 - d. consider and act upon requests to transfer ISDS septage from one community to another. Approval must be obtained from the board of health at both the shipping and receiving ends (310 CMR 15.19[5]).
8. **Regulate the construction and use of privies, chemical toilets, and humus toilets,** according to Environmental Code Title 5, 310 CMR 15.16, 15.17 and 15.18. **Written** approval of the board of health is required for construction or continued use (beyond a prior permit) of these alternative sewage disposal systems. **Site inspections** are required, including:
- a. soil tests (deep observation holes and percolation tests)
 - b. review of availability of community sewers
 - c. review of plans
 - d. inspections to determine compliances with regulations.
9. **Issue order for compliance** with **Environmental Code Title 5** regulations upon determination of any violation. (310 CMR 15.24).
10. **Issue order for compliance with Environmental Code Title 5** regulations upon any written notification from DEQE that a violation has been revealed, and notify the Commissioner of DEQE, **in writing**, of action that has been taken to effect compliance with Title 5 (Title 1, 310 CMR 15.6[1]).
11. **Review DEQE and DWPC site selections for disposal of sludge** from public water treatment and sewage disposal systems.

The Board of Health has legal authority to do the following:

1. Charge a fee for the issuance of a construction permit. The amount charged is determined by each board of health. (310 CMR 15.02[9]).
2. Charge a fee for the issuance of a "Septage Handling Permit" at the time of application. (310 CMR 15.19[6]).
3. Adopt more stringent local regulations, including requirement for additional permits and fees to be determined by the board of health.
4. Inspect the installation of all ISDS and, at any stage of construction, require necessary modifications if conditions are encountered that were not originally observed (e.g., unexpected soil conditions, enlargement of ISDS capacity). (310 CMR 15.2[10]).
5. Order the cleaning or repair of any ISDS that is causing "objectionable conditions" or polluting a watercourse. If the order is not complied with, the board of health may have the ISDS cleaned or repaired and bill the owner for expenses. (310 CMR 15.2[19]).
6. Require the installation of meters, dosing counters, or other flow measuring devices to record accurately the flow of sewage. (310 CMR 15.2[21]).

7. Grant a variance in the application of regulations for a particular case when, in its opinion, enforcement would do "manifest injustice" **and** the applicant has proved that environmental protection can be achieved without strict application of the particular provision. However, any variance granted may be revoked, modified, or suspended by DEQE. (310 CMR 15.20).

STATE RESPONSIBILITIES (DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING [DEQE])

1. Consider and act upon applications for permits for construction of individual sewage disposal systems for the following conditions:
 - a. if the total volume of sewage to be disposed of exceeds 15,000 gallons/day (310 CMR 15.2[1])
 - b. if the ISDS is to be used for the purification of disposal of industrial wastes (M.G.L. 111:17)
 - c. if the ISDS is located in a mobile home park (M.G.L. 140:32B, H)
 - d. review variance requests.
 - e. review and approve plans of sewage disposal not covered by Title 5.
2. Approve (and send written notice to the board of health) the location and method of disposal for seepage that is pumped from an ISDS. (310 CMR 15.19[4]). However, the local board of health must initially approve the disposal site.

SEWAGE DISPOSAL: BACKGROUND INFORMATION

Minimum standards and regulations for sewage disposal are contained in the Mass. State Environmental Code, which is enforced by local boards of health and the Department of Environmental Quality Engineering. Title 5 assigns to local boards of health the responsibility for enforcement of standards for individual subsurface sewage disposal systems (septic tanks, cesspools, and leaching facilities), provided that industrial wastes are not involved.

DEQE monitors and regulates public water treatment facilities and sewage disposal systems, and all facilities handling industrial wastes.

The **Division of Water Pollution Control** (DWPC) monitors the chemical and biological components of effluents of public systems, as well as the quality of water in watercourses. DWPC and DEQE together decide upon sites that may be used for sludge disposal, the prime concern being proximity to water resources. Boards of health have veto power over the assignment of sludge disposal sites.

Although the main **board of health** responsibility regarding sewage disposal is the regulation of small subsurface sewage disposal systems, the board of health has the broad responsibility for ensuring that water supplies are safe, and thus should be alert to the possible need for action to identify and eliminate sources of pollution. The board can seek assistance of DEQE when necessary, or alert DEQE to violations over which it has authority. The board of health may also work with or inform the Conservation Commission of the town, if its authority to protect wetlands is the more appropriate means of taking needed action. The board of health is concerned with potential health effects of contamination, whereas the Conservation Commission must be concerned with overall environmental impact.

RATIONALE

Safe disposal of all human and domestic wastes is necessary to protect the health of the individual, family, and the community and to prevent the occurrence of nuisances. To accomplish satisfactory results, such wastes must be disposed of so that:

- a. they will not contaminate any drinking water supply.

- b. they will not give rise to a public health hazard by being accessible to insects, rodents, or other possible carriers that may come in contact with food or drinking water.
- c. they will not give rise to a nuisance due to odor or unsightly appearance.
- d. they will not pollute or contaminate the waters of any bathing beach, shellfish breeding ground, or stream used for public or domestic water supply purposes, or for recreational purposes.
- e. they will not violate laws or regulations governing water pollution or sewage disposal.

Intensive land use by housing subdivisions further necessitates careful planning to avoid contamination of drinking water and public waterways. The use of garbage grinders increases burden on septic tanks and leaching areas, and various commonly-used household chemical cleaners (grease-cutting agents and bacteria-killing disinfectants) reduce the efficiency of septic tanks by destroying bacteria which help break down organic wastes. Household solvents (oven-cleaners and other grease-cutting compounds) may also contain chemicals that can pollute water supplies. These factors necessitate increased attention to public education regarding proper disposal of household sewage.

Prevention of Sewage Disposal Problems

An individual sewage disposal-leaching system usually consists of a septic tank together with a disposal or leaching area. The septic tank is a watertight container that retains sewage for a minimum of 36 hours so that solids are separated from liquid. The liquid is discharged from the tank and flows into the disposal area. Perforated pipes, laid on coarse gravel, allow the liquid effluent to seep into surrounding soil.

The key to sanitary sewage disposal is the absorbing capability of the soil. This is why regulations specify testing in advance to ensure that effluent will be absorbed properly. The septic tank itself must be regularly cleaned out to ensure proper settling of the solids.

"It is essential that the subsurface sewage disposal system be located where it will not pollute any water supply from a well or spring. It should be located at a distance from any water supply source and, if possible, at a lower elevation."* The location should be determined by a professional engineer or sanitarian.

Finally, efforts should be made to lend technical assistance for ISDS construction and to educate land developers and homeowners about the health effects of improper sewage disposal. A cooperative venture between the board of health and landowner will yield the best results.

* Murray, G. Handbook of Community Health. Philadelphia: Lea & Febiger. 1975, p 82.

PROTOCOL I

REVIEW OF SUBDIVISION PLANS

Subdivisions are special problems for boards of health. Even the definition of what constitutes a subdivision is complicated (M.G.L. 41:81L); however, a subdivision generally refers to the division of a tract of land into two or more house lots.*

As demands for housing in Massachusetts increase, the quality of land available for new construction is frequently marginal in percolation capacity. The land developer also has an economic interest in using the entire tract of land for construction purposes. Thus, there may be social and economic pressures to approve housing construction. **However**, the board of health's responsibility is to ensure safe, sanitary conditions by properly enforcing all regulations pertaining to individual sewage disposal systems. **When two or more houses are grouped in close proximity, the possibility of water contamination and environmental pollution are greatly increased.**

In addition to monitoring carefully the construction and installation of ISDSs, board of health members should be aware of the following items:

1. Before submitting any plan for formal approval in accordance with M.G.L. 41:81U (see #2 below), the applicant **may** submit a "preliminary plan" to the planning board and the board of health. Within 60 days after submission of this preliminary plan, the applicant and the city (or town) clerk must be notified, by certified mail, of the board's decision: approval, approval with modifications, or disapproval with detailed reasons therefor.
2. A definitive plan for the subdivision **must** be submitted to the Planning Board or Board of Selectmen for approval (a town of 10,000 population may choose not to have a Planning Board). In addition, **a copy of the plan must be filed with the board of health.** (M.G.L. 41:81 U)
3. This plan must include (see M.G.L. 41 and 310 CMR 15.81[L] for complete list):
 - a. existing and proposed lines of streets, ways, easements, and other public areas in a general manner
 - b. proposed system of drainage, including adjacent existing natural waterways
 - c. approximate boundary lines of proposed lots, with approximate areas and dimensions
 - d. topography of the land in a general manner.

Note that at least one percolation test must be performed on each lot.

4. Within 45 days after the plan is filed, the board of health or its agent shall submit to the planning board, in writing, approval or disapproval of the plan. Failure to report within this time period constitutes approval by the Board, as mandated in M.G.L. 41:81 U. In the event of disapproval, **the board of health shall specify which lots shown on the plan cannot be used for building sites, and include specific findings as well as reasons for disapproval.*** Unless the conditions for disapproval can be modified, approval of the planning board (who has final approval power) shall be on condition that no building or structures shall be built or placed upon the areas designated without consent by the board of health or its agent. In other words, if the board of health rejects a subdivision plan, it cannot be over-ruled by the Planning Board or any other town body **unless a municipal sewage system will service the proposed subdivision.** A copy of the report must be sent to the person who submitted the plan.
5. **Approval of this rough plan by the board of health does not constitute approval for construction of an ISDS.** Each lot must be evaluated separately to determine proper placement of houses and disposal areas. (See Protocol, "Installation, Modification, or Repair of an Individual Sewage Disposal System.") Upon evaluation, **prior to granting a Disposal Works Construction Permit**, certain lots may be deemed unsuitable for building, or need to be modified. It is advisable to make this process clear to all parties involved with the subdivision. Developers may be under the **mistaken** impression that approval of a preliminary plan means approval of each lot within the tract.

* According to a recent court ruling, "When a subdivider submits a definitive subdivision plan to a Planning Board and a Board of Health, he will seldom be in a position to prove that the requirements of the codes will be met with respect to what may ultimately be constructed on each individual lot in his subdivision even if he expects to do all the construction. There is no way of telling whether any given lot will meet the requirements of the code until it is known where the owner of the lot proposes to locate the building and how many bedrooms he proposes to have." (Robert Fairbairn and others, Trustees vs. Planning Board of Barnstable, Barn. 75-666, Appeals Court.) This situation can arise because the leach field's size and placement depends upon the size and placement of the adjoining dwelling.

PROTOCOL II

INSTALLATION, MODIFICATION, OR REPAIR OF AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Step 1. A representative of the board of health must perform a site examination and witness deep observation holes and percolation tests that are performed by a representative of the applicant, preferably the designer of the system.

This may be done before a formal application for a construction permit is made. It is highly recommended that the board of health representative be a registered sanitarian or engineer; however, a board of health member or its agent may inspect the site. The board of health representative acts for the board of health while the private firm acts as the landowner's representative.

The evaluation process includes the following steps, fully defined and described in Title 5, 310 CMR 15.00:

- a. site examination determines overall compatibility of lot, (e.g., amount of surface water accumulation, distance from streams and wetlands, distance from wells, slope, lot lines).
- b. deep observation determine maximum ground water elevation and presence of
holes bedrock or other impervious material that might impede the filtering process. At least two deep observation holes should be dug in the area to be used for leaching (unless three or more adjacent single-family lots are being examined at the same time by the same engineer) and the soil remains consistent. (See 310 CMR 15.03[3] for further specifications.)
- c. percolation tests determine how well the soil leaches (filters) at the elevation to be used for leaching (see separate protocol, III below, for description of process). At least one percolation test should be performed at the disposal area site; more tests may be necessary if the soil varies with depth or the disposal area is large. The results of percolation tests, together with the estimated daily sewage flow, determine the size of the leaching area necessary for sanitary disposal of sewage.

All expenses incurred for these evaluation procedures must be paid by the landowner, **not** the board of health.

Note: Before formal tests are made, the landowner may have the proposed lot examined by an engineer or sanitarian to determine its suitability for proper drainage and leaching of sewage. Soil maps may be consulted to get a rough estimation of its suitability. These initial tests are at the landowner's discretion and may not be substituted for tests witnessed by the board of health.

Step 2. Landowner or his/her agent submits an application form for Disposal Works Construction Permit. (See Title 5 for sample application form.)

This form must be accompanied by a plan for the proposed sewage disposal facilities. If conditions different from those specified in the application form and on the plan are found prior to or during actual construction of the ISDS, the permit should be invalidated.

Step 3. Plan for sewage disposal facility is submitted.

This plan must be prepared by a professional engineer or registered sanitarian. The plan must include a required list of technical specifications for the system (e.g., location of reserve area, results of percolation and deep observation hole tests, location of wetlands within 100 ft. of system). A complete list of minimum specifications can be found in Title 5 (310 CMR 15.00). Each plan should specify a design capacity based on the intended use rate of the system. The system should not be used for other purposes, such as converting a family dwelling into a restaurant. These regulations concerning ISDS specifications are designed to ensure the sanitary functioning of the system. Specifications are found in the following areas:

- construction in fill areas
 - drainage, discharge, and flow measurement
 - cover material
 - construction in fill areas
 - building sewers/conduits to septic tank
 - location, leaching area requirements, and test procedures
 - grease traps
 - septic tank
 - pumps and siphons
 - distribution boxes and leaching facilities.
- a. **If the plan review reveals compliance with regulations,** a permit should be issued. The permit is valid for two years and construction must begin before the expiration date (310 CMR 15.02[4]). This permit allows the landowner to construct, install, alter, or repair an ISDS. **It does not authorize the landowner to operate the system.** Before the system can be put into service, a Certificate of Compliance must be issued.
 - b. **If landowner requests a variance of the regulations,** see Variance Protocol, below.
 - c. **If examination reveals violation of regulations in Title 5,** permit must not be issued until violations are corrected. Notice of violations must be in writing. The landowner has the right to request a hearing as well as appeal the results of that hearing. See Violation Protocol, below, for a detailed description of board of health responsibilities in this matter.

Step 4. Installation, repair, or alteration of ISDS is completed and system is ready for service.

The person who designed the ISDS system or an agent of the board of health must inspect the system to determine compliance with the terms of the permit, the approved plan and all other Title 5 requirements. This is the final inspection. This person must certify, in writing, compliance with Title 5.

- a. **If system is in compliance with regulations,** board of health should issue Certificate of Compliance.
- b. **If landowner requests a variance of the regulations,** see Variance Protocol, below.
- c. **If inspection reveals violation of regulations in Title 5 or non-compliance with the terms of the permit and approved plan,** see Violation Protocol, below.

PROTOCOL III

WITNESSING A PERCOLATION TEST

Criteria

1. At least one percolation test must be performed at the site of each disposal area. More than one test is required where the soil structure varies or where large disposal areas are required.
2. Percolation tests shall be performed at no expense to the approving authority by a registered professional engineer, registered sanitarian, or other person who in the opinion of the approving authority, is qualified to perform such tests.
3. All percolation tests must be performed in the presence of a representative of the approving authority. The cost of labor and equipment necessary to dig test holes and the provision of water for the conduction of percolation tests should not be at the expense of the approving authority.
4. Percolation tests shall not be made in test holes that have remained open to the atmosphere for more than three days, nor shall they be made in frozen ground.
5. Percolation tests shall not be made in filled ground unless the soil has been mechanically or hydraulically compacted or allowed to settle for a period of 6 months and the requirements of 310 CMR 15.02(17) and 5.03(6) are met.

Procedures (from Title 5, 310 CMR 15.03[5])

1. Prepare a test hole in the proposed leaching strata within the disposal area of 12 inches in diameter with vertical sides 18 inches deep.
2. Establish a fixed point at the top of the test hole from which all measurements can be taken.
3. Scratch the bottom and sides of the test hole to remove any smeared soil surfaces. Either add two inches of coarse sand to protect the bottom from scouring, or insert a board or other impervious object in the hole so that water may be poured down or on it during the filling operation.
4. Carefully fill the hole with clear water to a minimum depth of 12 inches and maintain the water level by adding water as necessary for purpose of soil saturation, but in no case less than 15 minutes after first filling the hole.
5. After saturation, **if the water level drops to a depth of 9 inches in less than 30 minutes**, measure the length of time in minutes for it to drop from a depth of 9 inches to a depth of 6 inches. If the rate is erratic in the opinion of the approving authority, the hole shall be refilled and soaked until the drop per increment of time is steady. The time for the level to drop from a depth of 9 inches to a depth of 6 inches, divided by 3, will be the percolation rate in minutes per inch.
6. **If the initial 3-inch drop requires more than 30 minutes** (rate equal to more than 10 minutes per inch) the soil shall be saturated by filling the hole to the top and maintaining it full for at least 4 hours. The soil should then be permitted to swell overnight so that the soil conditions will approach those which exist during the wettest season of the year. After the overnight swelling period, the test shall be made again by filling the hole to a 12-inch depth and maintaining that level for 15 minutes, letting the level drop to 9 inches, then timing the drop between 9 inches and 6 inches. The time elapsed between 9 inches and 6 inches, divided by 3, shall be the percolation rate.
7. In certain soils, particularly coarse sands, the soil is so pervious as to make the percolation tests as described above difficult, impractical, and meaningless. Therefore, at the discretion of the approving authority, the test as described above may be waived, and a rate of two minutes per inch can be assumed provided that at least 24 gallons of water is added to the percolation holes within 15 minutes and it is impossible to obtain a liquid depth of 9 inches, or the percolation rate is faster than 30 seconds per inch.

PROTOCOL IV

GRANTING A VARIANCE

Procedures:*

1. The applicant requests in writing a variance of a specific regulation of Title 5.
2. The applicant notifies all abutters by certified mail at least 10 days before the board of health meeting at which the variance request will be on the agenda. This is not necessary if the system is only being repaired.
3. The board of health shall grant or deny the variance. The decision must be in writing.
4. If the variance is granted, the notice must be conspicuously posted for 30 days and shall be available to the public at all reasonable hours while it is in effect.
5. Notice of the grant of each variance must be filed with the Department of Environmental Quality Engineering by the board of health. The notice must state the variance granted and the date issued.
6. The Department of Environmental Quality Engineering shall within 30 days of receipt of the notice, approve, disapprove, or modify the variance. If the Department fails to comment within 30 days, approval shall be presumed.
7. No work may be done under any variance until the DEQE approves it or until 30 days have elapsed without DEQE's comment, unless the board of health or DEQE certifies in writing that an emergency exists.
8. Any variance granted under Title 5 may later be modified, suspended, revoked, or allowed to expire by the board of health or DEQE. This action may apply to the entire variance or a section thereof. **Before any action may be taken**, however, the holder of the variance must be notified in writing and given the opportunity to request a hearing (see Violation Protocol, below).
9. Any person aggrieved by the decision of the board of health or DEQE may seek relief by appealing within 30 days in any court of competent jurisdiction as provided by the laws of the Commonwealth.

* Procedures taken from DEQE memo and Title 5, 310 CMR 15.20, 21 and 25.

PROTOCOL V

VIOLATIONS

Step 1. Examination of ISDS or proposed lot reveals violation of Title 5 regulation.

These violations could be revealed during several board of health procedures:

- Performing site examination and witnessing deep observation holes and percolation tests for purpose of issuing a Disposal Works Construction permit.
- Inspecting ISDS during installation/construction (usually done if conditions are encountered that were not originally observed when construction permit was issued).
- Inspecting an ISDS in response to a complaint (e.g., foul odor, discharge into watercourse).

Step 2. Board of Health must issue an order of compliance. (See 310 CMR 15.23)

This order must be in writing and shall be served to all persons responsible for the violated provision(s). Orders must be served in the following manner:

- Personally, by any person authorized to serve civil process, or
- By leaving a copy of the Order at his/her last and usual place of abode, or
- By sending him/her a copy of the Order by registered or certified mail, return receipt requested, if he/she is within the Commonwealth, or
- If his/her last and usual place of abode is unknown or outside the Commonwealth, by posting a copy of the Order in a conspicuous place on or about the affected premises (Title 5, 310 CMR 15.23[2]).

The order must:

- a. include a statement of the violation of defect, and may suggest action which, if taken, will effect compliance with this Title, and
- b. allot a reasonable time for any action it requires, and
- c. inform the person to whom it is directed of his/her right to a hearing and of his/her responsibility to request the hearing, and to whom the request shall be made. (Title 5, 310 CMR 15.23[3]).

Step 3. Hearing is requested upon receipt of an Order.

This **written** request must be filed with the board of health within 7 days after the day the order was served. Upon receipt of the request, the board must set a time and place for the hearing and inform the petitioner in writing. The hearing must take place within 45 days after the day the order was served. The hearing may be postponed for a reasonable time beyond this 45-day limit if the petitioner submits a good and sufficient reason for postponement. (310 CMR 15.24[1]).

At the hearing, the petitioner must be given an opportunity to be heard and to show cause why the Order should be modified or withdrawn (310 CMR 15.24[2]).

- a. **If the Order is sustained or modified**, the petitioner must be informed in writing of the decision. The order must be carried out within the time period specified in the original Order or in the modified Order. Any person dissatisfied by the hearing's outcome may seek relief within 30 days in any court of competent jurisdiction.

Also, every notice, Order, or other record prepared by the board of health in connection with a hearing must be entered as a matter of public record in the town/city clerk's office or board of health office (Title 5, 310 CMR 15.24[3], 15.24[4], 15.25[1]).

- b. **If the order is withdrawn**, no further action is necessary, unless a certificate or permit needs to be issued.

Step 4. Landowner is issued an Order, but does not file a written petition for a hearing.

The Order must be complied with within 7 days after the day the Order was served.

Step 5. Landowner requests a variance in the regulations.

See Granting a Variance, below, 13.

Step 6. Landowner fails to comply with an order, or interferes with a Title 5 inspection.

Upon conviction (see Legal Authority and Procedures, Chapter 2 of this Guide, for more description of legal procedures) in the court of competent jurisdiction, the violator can be fined not less than \$10 or more than \$500. **Each day's failure to comply with an order shall constitute a separate violation** (Title 1, 310 CMR 15.10[1]).

PROTOCOL VI

REGULATION OF PRIVIES, TEMPORARY OR CHEMICAL TOILETS, AND HUMUS TOILETS

The board of health must approve in writing the construction or continued use (for instance, when there is a change in ownership, or periodically at its discretion) of a privy, chemical toilet or humus toilet upon determination that it will not (a) endanger the health of any person or (b) cause a nuisance (310 CMR 15.16[1], Title 5), and that (c) the end product from a humus toilet will be covered with a minimum of two feet of clean, compacted earth in a place approved by the board of health (310 CMR 15.17[1]).

When permits for temporary (chemical) toilets are requested for large events, such as fairs or concerts, the board of health must require and monitor compliance with the regulations of the State Plumbing Code (248 CMR 2.00) regarding the proper ratio of number of toilets to number of people.

Installation, modification or repair of subsurface sewage disposal systems for grey water (i.e. wastewater other than toilet waste) from lots served by privies, chemical toilets or humus toilets require the usual permits for ISDS, and must meet standard site requirements, although a reduction not to exceed 40% of the design flow for subsurface sewage disposal systems may be allowed for reduced water usage (310 CMR 15.16[2]).

Suggested Construction of a Privy

To maintain minimal hygienic disposal of excreta, a privy should be built in accordance with the following suggestions:

1. The site should be at least 100 feet away from water sources as stipulated in 310 CMR 15.03(7).
2. The pit should be sufficiently deep, so as to store excreta off the ground surface and keep it inaccessible to animals and insects.
3. It should include a base sunk into the ground and a floor.
4. It should be built on an elevated mound of dirt which, in combination with the base, provides drainage away from the pit.
5. The enclosure should be darkened in order to minimize fly attraction.
6. It should include a ventilation opening at the top.
7. The roof should be slanted to facilitate runoff.

Privies must be constructed with self-closing covers and flytight vaults, and with a screened vent from the vault to the atmosphere (310 CMR 15.16[3]). When a privy vault becomes filled to within 2 feet of the surface of the ground, it shall either be cleaned and the contents disposed of in a sanitary manner approved by the board of health, or it shall be covered with a minimum of 2 feet of clean, compacted earth (310 CMR 15.16[4]).

SUMMARY

Forms and Permits.*

When Used

Written approval for subdivision plan	Needed by planning board to determine approval or disapproval of subdivision plan.
Application for Disposal Works Construction Permit	Submitted to board of health after site inspection; for repair, modification, or construction of ISDS.
Disposal Works Construction Permit	Granted after formal application is made, site plan reviewed and satisfactory soil tests made. See 310 CMR 15.02(1), 15.02(2), 15.18(1) for circumstances under which permit may not be issued by local board of health. Valid for two years.
Disposal Works Installers Permit	Granted to person(s) or firm engaged in construction, alteration, installation or repair of any ISDS. Permit must be issued annually.
Septage Handler's Permit	Granted to person(s) or firm engaged in pumping or transporting ISDS contents. Issued annually. Site of disposal must be shown on application.
Certificate of Compliance	Issued before ISDS can be placed into service and after inspection by designer of system and/or board of health agent.
Written approval for privy, chemical toilet, or humus toilet	Needed for construction or continued use.
Written approval for septage disposal site	Needed to establish a disposal site.

* (See Title 5 for sample permits and orders)

PART II: ENVIRONMENTAL SANITATION

CHAPTER 7.

CHAPTER 7. Sewage Disposal

Summary of Responsibilities

Rationale

Protocol I:

Review of Subdivision Plans

Protocol II:

Installation, Modification or Repair of an
Individual Sewage Disposal System

Protocol III:

Witnessing a Percolation Test

Protocol IV:

Granting A Variance

Protocol V:

Violations

Protocol VI:

Regulation of Privies, Temporary or
Chemical Toilets, and Humus Toilets

CHAPTER 8

SOLID WASTE DISPOSAL

BOARD OF HEALTH RESPONSIBILITIES

1. **Assign sites for landfill facilities and refuse transfer stations** (M.G.L. 111:150A), according to the criteria outlined in the State Regulations for the Disposal of Solid Wastes by Sanitary Landfill (310 CMR 19.28) and Regulations for Installation, Operation and Maintenance of Solid Waste Transfer Stations. (310 CMR 18.23).
 - a. public notice and hearing(s) are required
 - b. assignment may be appealed to DEQE
 - c. assignment is subject to approval of definitive plans and design by DEQE.
2. **Consider and act upon applications** for permits for salvaging or recycling materials at disposal or transfer sites (310 CMR 19.18, 310 CMR 18.15).
3. **Consider and act upon applications** for permits for the disposal of special wastes (310 CMR 19.16). (Special wastes are not accepted at transfer stations except when approved in writing by DEQE. See also Chapter 9, Part D on Hazardous Waste Management.)
4. **Ensure** that disposal or transfer facilities do not present a danger to the public health (M.G.L. 111:150A). Regulations specify minimum features for safe, clean and orderly operation, including supervision of the facilities, operating procedures, diversion of surface runoff, maintenance of access road and fence, control of pests, dust, wind-blown debris, etc.
5. **Periodically inspect landfill sites** (310 CMR 19.25) and solid waste transfer stations (310 CMR 18.00).
6. **Adopt rules and regulations** for the control of the removal, transportation or disposal of garbage, offal or other offensive substances (M.G.L. 111:31B).
7. **Consider and act upon applications** for annual permits to remove or transport garbage or offensive substances through the streets of the city or town, provided such refuse has been collected in the city/town; **keep registry** of transporters of such refuse through the city/town, and **enforce local rules** and regulations regarding such transport (M.G.L. 111:31A).
8. **Ensure** that refuse storage and disposal are in compliance with the provisions of M.G.L. 111:150A, 310 CMR 19.00, 310 CMR 18.00, and all other applicable laws and regulations, including but not limited to state minimum standards and local regulations for dwellings, food service establishments, retail food stores, mobile home parks, camps, motels, etc. (See Sanitary and Environmental Codes.)
9. **Cooperate with regional refuse disposal planning committee**, regional refuse disposal planning board, and/or regional refuse disposal district as provided by M.G.L. 40:44A-F, if the town or city has voted to participate. These provisions of Chapter 40 of the General Laws encourage inter-municipal planning and cooperative arrangements for refuse disposal.

STATE RESPONSIBILITIES (DEQE)

1. Assign sites for landfill facilities and transfer stations to be operated or contracted for by state agencies (M.G.L. 111:150A).
2. Review proposed use, plans and design data for landfill facilities and transfer facilities. DEQE approval is required before a landfill facility or transfer station may be constructed or operated (M.G.L. 111:150A).
3. Advise local boards of health upon request on site selection of landfill facilities or transfer stations (M.G.L. 111:150A, 310 CMR 19.03[4], 310 CMR 18.02[4]), and on questions on proper handling and disposal of "special wastes," including asbestos, liquid wastes, and others.
4. Inspect the preparation of the landfill site and construction of any transfer station to determine compliance with the approved plans, and issue a letter of compliance, before the facility may be used (310 CMR 19.04[4], 310 CMR 18.04).
5. Periodically inspect sanitary landfill and transfer station operation (M.G.L. 111:150A, 310 CMR 19.25, 310 CMR 18.00).
6. Ensure that the public health is not endangered by solid waste disposal and transfer facilities (M.G.L. 111:150A); enforce 310 CMR 19.00 and 310 CMR 18.00 (Regulations for Disposal of Solid Wastes by Sanitary Landfill, and Installation, Operation and Maintenance of Solid Waste Transfer stations).
7. If inspection of the sanitary landfill facility reveals that it does not comply with the Regulations for the Disposal of Solid Wastes by Sanitary Landfill (310 CMR 19.00) or Regulation for Installation, Operation and Maintenance of Solid Waste Transfer Stations (310 CMR 18.00), the Commissioner of DEQE must notify and order in writing the person responsible to take appropriate measures to assure compliance with the regulations.

The commissioner of DEQE may rescind, suspend, or modify the assignment of the sanitary landfill or transfer facility if a violation of the regulation exists. (310 CMR 19.29, 310 CMR 18.24[2]).

8. DEQE may rescind or suspend the assignment for a refuse disposal facility if it determines that the operation or maintenance of the facility results in a nuisance or a danger to the public health.
Due notice and a public hearing must be granted before DEQE takes this action (M.G.L. 111:150A).
9. Review and approve any proposal for storage or use of ash from burned coal, if it is to be used for any commercial or industrial purpose (M.G.L. 111:150A).

RATIONALE

Safe disposal and recycling of solid wastes have re-emerged as major public concerns for several reasons. Sanitary landfills, while reducing some of the hazardous side effects of open dumping and open burning (e.g., rodent infestation and air pollution) have in many cases created a new set of hazardous conditions, including toxic or noxious "leachates" and explosive gas pockets.

Many materials that have been disposed of as solid waste in municipal landfills are now known to have or are suspected of having adverse effects on health, either in their original form or when they decompose. For example, plastics, petrochemicals, metal containers and acids which may be harmless or inert in a household trash barrel may interact in a landfill and, over time, with or without exposure to water and air, create potentially hazardous conditions. In addition, wastes known to be hazardous have only recently come under strict regulation, enforcement of which is still in its infancy. The amounts and locations of hazardous wastes disposal before 1980 are to a large extent unknown.

Many communities are already facing large increases in local expenditures to clean up conditions caused by old dumps and landfills, and to establish more expensive but safer landfills or transfer stations for disposal of solid wastes. It is becoming more obvious that consumer products that seem cheap to buy are not cheap to get rid of, and the cost ultimately falls upon the taxpayers.

Federal and state governments have acted to regulate and monitor hazardous and solid waste disposal, so that cities and towns will have to find more acceptable methods of disposing of wastes.

Boards of health have the responsibility for assigning solid waste transfer and disposal sites, and for protecting the health of the community from conditions beyond the control of the individual citizens. Three strategies may be useful in carrying out these duties:

1. To protect the community from adverse effects of old dumps and landfills:
 - a. identify the locations (and map them) of all old dumps and landfill sites, private or public
 - b. try to determine whether any known hazardous materials were disposed of in known locations
 - c. check for signs of excessive sickness or mortality in the vicinity of potentially hazardous sites
 - d. consider what action may be necessary to protect the public from further risk.
2. Assess the town's current disposal arrangements and future needs, and develop (together with public works and other relevant town or regional bodies) a long term plan or list of alternatives, so that the town can anticipate major expenditures and plan accordingly.
3. Assign a member to monitor meetings of regional planning agencies, and after deliberation of a proposal, offer recommendations to municipal officials and planning departments.

Alternatives to sanitary landfills, or to reliance solely on landfills, include recycling, use of solid wastes as fuel for generating energy, and transfer of waste to places that can recycle, burn or otherwise dispose of it. Since recycling is costly and cumbersome on a small scale, towns may want to contract with or subsidize regional or private recycling programs, or work with neighboring towns to collect and transport recyclable materials. Especially in view of the probable future costs of operating landfills in compliance with new regulations, recycling programs and transfer stations may be economical as well as wise from the point of view of conserving natural resources.

Resource Recovery

The major obstacle to recovering resources, by means of reprocessing, reusing, and recycling, has always been an economic one. To set up recovery plants and to separate and collect recoverable materials have generally been considered very expensive. However, as industry has realized how expensive it is to develop **new** resources, more and more attention has been directed toward resource recovery. Many communities have organized voluntary efforts to collect glass, paper, and aluminum cans, usually at the municipal disposal site, with varying degrees of success. Major demonstration projects currently active in two Massachusetts towns provide compartmentalized trucks to make weekly collection of paper, glass, and cans that have been separated by consumers. So far, one program has shown a profit and the other has been breaking even. San Diego has a project going that is recovering oil from wastes; Mt. View, California, is recovering gas from its sanitary landfill operation; and a plant in Delaware is recovering solid fuel from wastes and sludge.

The salvage industry is growing fast in the United States. Currently 25 percent of the 200 million tons of major metals, paper, rubber, glass, and textiles processed each year are recycled wastes. The most sought after materials are copper, stainless steel, nickel, aluminum, lead, steel, and zinc. Unfortunately, because of market fluctuation and the low cost of raw materials, paper and glass are in a less favorable position. There is a great need for governmental and economic incentives to continue the expansion of salvaging.

Facilities generating electricity by incinerating solid wastes have proven successful in various parts of the country. The disadvantages of high capital investment, air pollution, and disposal of the residue must, however, be considered and dealt with.

Even if all of our combustible solid wastes were burned, the contribution to national energy demand would be no more than 10 percent.¹ Greater savings can be realized from the increased recycling of metals, which have lower energy input than the processed ones. Decreasing the energy consumed on making packaging (including bottles and cans) would contribute tremendously to our supply of energy.

The following table from Chanlett illustrates the potential energy savings from various resource recovery techniques.² The unit of measurement is trillions of BTU's. One trillion of BTU's is approximately the amount of energy that could meet the electricity needs of a community of 800,000 for a period of 8 weeks.

Trillions of BTU's			
Recovery Technique	1980	1985	1990
Use of large scale energy recovery plants	60	230	496
Recycling all possible aluminum, iron, steel, and glass	275	335	400
Savings of energy through use of refillable beverage containers	420	520	620
Savings of energy through reduction of packaging	730	990	1200

Resource recovery activities include:

REPROCESSING

Incineration of refuse to produce electricity. The remaining residue may be used to make bricks.

Sewage treatment can generate fuel such as methane gas to replace natural gas.

Composting of vegetable and animal wastes produces soil enriching humus. Sewage sludge may be added to the compost, provided it is not contaminated with heavy metal or other harmful residues.

REUSING

Glass bottles can be reused, after cleaning, for resale of the same product. In Oregon, which has a beverage container law, one major company is realizing a 90-95% return rate of bottles.

Cans also can be reused. A company in Oregon is realizing an 80-85% return rate on cans.

Plastic containers, properly cleaned, can be used instead of foil for storing food.

Paper bags can be reused at stores.

RECYCLING

Paper can be recycled and made into newspaper and boxes.

Glass bottles and jars can be melted down and the glass used to make new containers.

Aluminum cans can be melted and reformed repeatedly.

Steel cans can be de-tinned and used in steel production.

Old tires can yield both oil and combustible gases.

Local Regulation of Transport and Removal of Garbage, Offal, and Other Offensive Substances

Sections 31A and 31B of Chapter 111 of the General Laws assign responsibility for control of transport and removal of garbage specifically to boards of health. Besides providing for annual permits to persons who collect garbage within the town, section 31A requires that persons who transport garbage or offensive substances **through** the town from outside locations also register with the board. Local boards may make reasonable rules and regulations for such activities, each violation of which is to be punished by a fine of \$50 or less (M.G.L. 111:31B).

With the authority granted by these sections, the board of health may require registration of dumpsters, establish an annual permit requirement and make reasonable rules and regulations for such systems for collection and transport of garbage.

Special Wastes

Special wastes are defined as "materials such as sewage solids, radioactive wastes, pathological wastes, explosive materials, chemicals, certain liquid wastes, or other materials of hazardous nature or materials requiring special handling or procedures for disposal" (310 CMR 19.18 and 310 CMR 18.15). DEQE can help identify which wastes are considered "hazardous wastes" and can provide guidance on procedures for handling other special wastes so that they will not create a public health hazard.

Guidelines for safe disposal of asbestos are provided below, since properly wetted and bagged asbestos is **not** a hazardous substance, and is suitable for disposal at approved landfills. The **failure** to dispose of wetted asbestos is likely to create a public health hazard, since asbestos fibers are hazardous when they are "friable," that is when dry particles can escape into the air. On the other hand, when wet, the fibers are inert, insoluble in water, and unlikely to leach out of the soil.

DEQE has recommended that boards of health work with local school committees removing asbestos from school buildings to find suitable municipal disposal sites (that can be virtually any parcel of municipally-owned land), so that the asbestos-removal program can be expedited. In accordance with M.G.L. 111:150A, the board of health must hold a public hearing and publish notice of the actual assignment. DEQE must approve the plans for the disposal procedure, and the 60-day appeal period must be observed before disposal can begin at the assigned site.

It is crucial that the asbestos-containing waste remain in a slurry state during all handling operations, **including transport to the disposal site** (in a closed system), or else be properly bagged or contained. Also, slurry pumped into the trench at the landfill should **immediately** be covered with at least six inches of non-asbestos-containing material. It should **not** be left to the discretion of the landfill operator or asbestos-removing contractor as to how much time it takes for the asbestos-containing waste to dry and become friable.

PROCEDURES FOR ASSIGNMENT AND INSPECTION OF SOLID WASTE LANDFILL SITES AND TRANSFER STATIONS

1. The board of health must assign sites for sanitary landfill and solid waste transfer stations, other than those run or contracted for by the state (M.G.L. 111:150A, 310 CMR 19.28, 310 CMR 18.23).
 - a. The board of health may assign a site only after a public hearing has been held.
 - b. The board must give public notice of the assignment after it has been made.
 - c. Anyone may appeal the board of health's site assignment by filing a petition to DEQE within 60 days of the publication of notice of the assignment. DEQE may, after due notice and a public hearing, rescind or suspend the assignment or modify it by imposing or amending conditions (M.G.L. 111:150A).
2. Detailed plans and specifications of operations must be submitted to DEQE for approval (M.G.L. 111:150A; 310 CMR 19.03, 310 CMR 18.03).
3. The board of health may issue a permit for the salvaging or recycling of materials from the landfill site or transfer station. The permit may be revoked by the board or by DEQE if the salvaging operation does not comply with the requirements of 310 CMR 19.18 and 310 CMR 18.15.
4. The board of health must issue a permit before the operator of the landfill facility may dispose of special wastes in the sanitary landfill (310 CMR 19.16).

A copy of a permit for the disposal of special wastes must be filed with DEQE's Division of Hazardous Waste. Handling and disposal of certain chemical and other hazardous wastes must be in accordance with M.G.L. 21C and regulations promulgated by the Division of Hazardous Waste.

Special wastes are not allowed at transfer stations except when approved in writing by DEQE under such conditions as DEQE may specify (310 CMR 18.13). Hot loads are not to be accepted at transfer station facilities (310 CMR 18.07[2]).

5. The board or DEQE may require a program for the control and elimination of insects and rodents at the sanitary landfill or transfer station site (310 CMR 19.20, 310 CMR 18.17).
6. The board may, by regulation, specify the maximum size of large, heavy, or bulky items to be disposed of in the sanitary landfill or transfer station and may prohibit altogether the disposal of certain items (310 CMR 19.17, 310 CMR 18.14).
7. The board may, if it determines that the operation or maintenance of the facility causes a nuisance or a danger to the public health (by reason of odor, dust, fire, smoke, flies, vermin, etc.) rescind or suspend the assignment of the facility, or may modify it through the imposition or amendment of conditions (M.G.L. 111:150A).

This action must follow due notice and a public hearing.

8. The board of health must receive and keep on file a copy of the required DEQE approved emergency plan for a transfer station. The board is to be notified immediately whenever the emergency plan is implemented.
9. Variances for solid waste transfer or disposal facilities may be granted only by DEQE. Notice of the grant of variance shall be filed with the board of health and the clerk of the city or town in which the facility is located. Requests for a variance may be made through the local board of health (310 CMR 18.27, 310 CMR 19.32).

DEFINITIONS (M.G.L. 111:150A)

1. Facility means:
 - a. sanitary landfill.
 - b. a refuse transfer station.
 - c. a refuse incinerator with grate area in excess of ten square feet.
 - d. a refuse composting plant.
 - e. a residual waste storage or treatment plant.
 - f. a dumping ground for refuse or any other works for treatment or disposing of refuse,
2. Refuse means all solid or liquid waste materials:
 - a. including
 - garbage and rubbish, sludge and residual waste
 - b. not including
 - sewage, hazardous wastes, ash from the combustion of coal.
3. Sanitary landfill means: an engineering method of disposing of solid waste on land by spreading the waste, compacting and covering the waste with a soil cover each day in a manner which does not create a nuisance or hazard to public health or safety.

POLICY FOR THE HANDLING AND DISPOSAL OF "NON FRIABLE" ASBESTOS WASTE

(Prepared by DEQE, June 20, 1979)

Background

It has been clearly established that asbestos fibers are a hazard to human health when inhaled. For this reason EPA has published very specific procedures for the removal, handling, transport, and disposal of asbestos-containing material.

There are two properties of asbestos which make it particularly suitable for disposal by sanitary landfill:

1. The mineral fibers resist degradation and are inert and insoluble in water. As such, they do not represent a threat to ground-water supplies as the result of leaching.
2. Because of its fibrous nature asbestos tends to lodge in the voids between individual grains of sand and gravel, unless the material at the point of land disposal is exceptionally coarse or the area is subject to flooding.

EPA and State Policy

In accordance with the Clean Air Act, EPA has published emission standards for asbestos mills, roadways, manufacturing processes, and demolition and renovation operations (40 CFR, Part 61, Subpart B, Section 61.22). The State is enforcing the federal regulations as they are written.

It has become apparent, however, that there is widespread misunderstanding of the purpose and meaning of these regulations. In order to clear up this confusion, a distinction must be made between "friable" and "non-friable" asbestos material:

"Friable asbestos material" means any material that contains more than 1 percent asbestos by weight and that can be crumbled, pulverized, or reduced to a powder, when dry, by hand pressure."

(40 CFR, Part 61, Subpart B, Section 61.21)

It is possible to treat asbestos materials or wastes with a wetting agent and water so that they are in a state in which fibers cannot become entrained in the air. Caution must be exercised to make certain that such wastes remain in a wetted, or "non-friable," state while they are being handled, transported, or disposed of.

All of the precautionary regulations set forth in Section 61.22 apply only to **friable** wastes. The regulations have been designed by EPA to encourage contractors to maintain the asbestos material in a wetted state.

In another section of the regulations EPA has published requirements for waste disposal sites for asbestos-containing materials (40 CFR Part 61, Subpart B, Section 61.25). "Asbestos-containing waste material" is defined in the regulations as "any waste which contains commercial asbestos and is generated by a source subject to the provisions of this subpart, including . . . friable asbestos waste material, and bags or containers that previously contained commercial asbestos." Unless the material is covered with either 6 inches of dirt or an approved dust suppressant at the end of each operating day, the disposal area must be fenced and posted with warning signs. No visible emissions are allowed to emanate from uncovered disposal areas.

Implementation of Asbestos Policy

Generally, private and municipal landfill operators have been unwilling to accept asbestos wastes because they regard it as a "hazardous" substance. Therefore, it is necessary to clarify the difference between hazardous and non-hazardous forms of asbestos.

Techniques which will render asbestos materials and wastes from demolition sites into "non-friable" asbestos, and therefore "non-hazardous" wastes, should be encouraged by the department. The following procedures will be acceptable in those areas under departmental jurisdiction:

1. During removal operations, water and a wetting agent are to be applied to the asbestos-containing substances so that no asbestos becomes entrained into the air.
2. Contaminated work clothes and equipment which have been discarded are to be hauled from the site in sealed plastic bags, according to the regulations for "friable" asbestos.

Method I

The wetted asbestos may be sucked up as a slurry into a closed vacuum truck system, making certain that no asbestos fibers can be entrained through the vacuum exhaust system.

When this method is used, arrangements should be made for expeditious disposal of contaminated work clothes and asbestos wastes which are in a "non-friable" state at an approved landfill. Subject to the approval of the Department's Regional Environmental Engineer on a case-by-case basis, it is suggested that an agreement be reached between the landfill operator and the demolition contractor so that

1. advance notice is given to the disposal facility operator when a waste shipment is ready for disposal;
2. a trench is opened at the landfill;
3. both contaminated work clothes and "non-friable" asbestos slurry are deposited directly into the trench;
4. the entire waste load is covered shortly after delivery (before any of the wetted asbestos becomes dry and, therefore, friable);
5. precaution is taken to select an area which will not be subject to future excavation; and
6. the location of the asbestos waste is noted for future reference on a plan of the landfill area on file with DEQE.

Method II

Properly wetted and bagged asbestos waste may be placed at the active face of an approved, large landfill for disposal. If the waste material is placed there early in the day, sufficient wastes will be brought in during the operating day for the asbestos waste to be thoroughly covered before it dries out and, therefore, becomes friable.

1. advance notice should be given to the disposal facility operator;
2. adequate daily cover shall be placed over that section of the landfill which contains asbestos waste.

Compliance with Other Regulations

It should be noted that **asbestos is a special waste** as defined in the Department's "Regulations for Disposal of Solid Waste by Sanitary Landfill," published in 1971. Attention is called to the provisions of Regulation 16, which require that permission of the assigning authority (i.e., local Board of Health) be obtained for such disposal, and that copies of the approval be sent to both the Department's Regional Environmental Engineer and the appropriate office of the Division of Water Pollution Control.

This policy in no way changes the applicable rules and regulations of any other state or federal agency having jurisdiction over the removal and handling of asbestos-containing materials.

CHAPTER 8.

CHAPTER 8. Solid Waste Disposal

- Summary of Responsibilities
- Rationale
- Recycling and Resource Recovery
- Procedure for Site Assignment
- Policy for Disposal of Non-Friable Asbestos Waste

CHAPTER 9

HAZARDOUS MATERIALS AND WASTES: USE, HANDLING AND DISPOSAL

INTRODUCTION

Technological innovations in recent decades have brought large quantities of new chemical compounds into the public marketplace. In the United States, demands for energy to make new products, to travel, to transport goods and to heat and cool living areas and other buildings have increased. Systems for regulating and controlling the use of hazardous substances and the disposal of by-products, of waste material, of spilled oil and toxic chemicals are, however, in their infancy. In many instances, little is known about the health effects of a particular substance or waste.

Federal and state governments have initiated regulatory and surveillance programs, and have undertaken efforts to study the health effects of many substances that may be present in air, water, food and consumer products. Reliable information on health effects is not yet available for many potentially harmful substances. It thus behooves boards of health to be cautious and careful in their selections of solid waste disposal sites, to be alert to potential threats to health and the environment that may occur due to misuse or spillage of oil, pesticides, nuclear and other hazardous materials and wastes, and to keep well-informed about the state and federal agencies that can assist them in case of emergencies or suspected contamination problems.

Because of the technical complexities of regulation, local governmental agencies are poorly equipped to monitor or regulate hazardous materials use, handling and disposal. Local boards of health may limit the use of pesticides, and may act to abate nuisances and regulate noisome trades, so that obvious threats to public health can be dealt with. Regarding air pollution and radiation control, local proposed regulations must be approved by the state agencies involved (MDPH and DEQE).

The sections below outline the current regulatory and monitoring systems for five groups of hazardous materials and wastes. Since new information and new legislative and administrative actions appear every day on these subjects, boards of health are advised to seek up-to-date sources of information on any topic of special concern, and to keep generally informed on all topics.

PART A: HAZARDOUS SUBSTANCES LABELING AND USE*

RECOMMENDED BOARD OF HEALTH ACTIVITY

Local boards of health should be aware of the power of the Commissioner of Health to declare substances to be "banned hazardous substances," and to enforce M.G.L. 94B, "Hazardous Substances Labelling Law," including powers of state inspectors to inspect premises (Sec. 6), examine records (Sec. 7), and embargo articles suspected of being misbranded or known to be a banned hazardous substance (Sec. 5).

STATE RESPONSIBILITIES (MDPH)

Regulations concerning Hazardous Substances (105 CMR 650.000) were promulgated in November 1979 "to establish the administration and enforcement of regulations concerning hazardous substances" (pursuant to M.G.L. 94B:2). The regulation includes definition from M.G.L. 94B:1:

- a. "banned hazardous substance," "hazardous substances"
- b. "combustible"
- c. "electrical hazard," "mechanical hazard," "thermal hazard"
- d. "extremely flammable" and "flammable"
- e. "highly toxic" and "toxic"
- f. "irritant"
- g. "strong sensitizers," "strong allergic sensitizers" and "photodynamic sensitizers"
- h. "misbranded," and other terms.

The regulations put in place a mechanism under the authority of M.G.L. 94B:1-10 and M.G.L. 111:3, 5, and 6 for the MDPH to ban other hazardous substances and require their repurchase by the manufacturers. The state regulations are consistent with federal regulations established pursuant to the Federal Hazardous Substances Act (15 U.S.C.A. Sec. 1261 et seq.).

Responsibilities of the Commissioner of Public Health (M.G.L. 94:1-10)

1. Declare substances which meet the definition to be hazardous, through the promulgation of rules and regulations.
2. Establish variations of additional labelling requirements as necessary for the protection of the public health and safety.
3. Declare any hazardous substance intended or produced in a form suitable for use in the household or by children to be misbranded when it fails to bear the proper label. Hazardous substances must bear the following information:
 - a. the name and place of business of the manufacturing packer, distributor, or seller
 - b. the common or usual name of the hazardous substance; or the chemical name if there is no common name; or the generic name if permitted as required by the Commissioner of MDPH
 - c. the word DANGER on substances which are corrosive, extremely flammable or high toxic
 - d. the word WARNING or CAUTION on all other hazardous substances

* DEFINITION: "Hazardous substance" means any substance or mixture of substances which is toxic, corrosive, or irritant, a strong sensitizer, flammable or which generates pressure through decomposition, heat, or other means, if such substance or mixture of substances may cause substantial personal injury or substantial illness, during or as a proximate result of any customary or reasonably foreseeable handling or use, including ingestion by children, or any toy or other article intended for use by children which presents an electrical, mechanical or thermal hazard. (M.G.L. 94B:1)

- e. a statement describing the principal hazard or hazards of the material, such as FLAMMABLE, VAPOR HARMFUL, CAUSES BURNS, ABSORBED THROUGH SKIN, etc.
 - f. precautionary measures describing the action to be followed or avoided concerning the hazardous substance
 - g. instructions, when necessary or appropriate, for first-aid treatment
 - h. the word POISON for any hazardous substance which is defined as highly toxic in Section 1 of Ch. 94B
 - i. instructions for hazardous substances which require special handling or storage
 - j. the statement "Keep Out Of Reach of Children," or an equivalent statement.
4. Promulgate regulations exempting certain hazardous substances if it is deemed that full compliance is unnecessary or impracticable.
5. Declare an article to be a banned hazardous substance and require it to be removed from commerce if it is deemed that the article cannot be properly labelled to ensure public health and safety or if it presents an imminent danger.
6. Enforce the following:
No one shall:
 - a. sell, expose for sale, deliver, give away, or possess any misbranded or banned hazardous substance.
 - b. alter or remove any part of a label on a hazardous substance when the substance is in commerce or being held for sale.
 - c. receive in commerce and then deliver any misbranded or banned hazardous substance.
 - d. sell, expose for sale, deliver, give away, or possess any hazardous substance in a reused food, drug, or cosmetic container or a container that is labelled as such.
 - f. use to one's own advantage any information discovered during the inspection of any premises or examination of records concerning hazardous substances.
7. Designate officers or employees of MDPH to have access to (pursuant to a search warrant duly issued by a court of competent jurisdiction) and to copy all records showing the movement in commerce of any hazardous substances, or the holding of the substances after their movement in commerce, and the quantity, shipper, and consignee of the substances.
8. Cause to be published at his discretion reports and summarizing judgments, decrees, or court orders concerning hazardous substances. Information regarding hazardous substances in situations involving possible damage to health may also be disseminated.

Responsibilities of the Director of Food and Drugs

1. Affix or cause to be affixed to any banned or misbranded hazardous substance a tag giving notice to the manufacturer, distributor, or owner of the substance that it is or is suspected to be a banned or misbranded hazardous substance and has been detained or embargoed.

The article may not be removed from the premises until permission is given by the director, his inspector, or the court (M.G.L. 94B:5).

2. The director and inspectors shall have access and entry at reasonable times to any premises as long as they have a search warrant.

No sample of an alleged hazardous substance obtained during an inspection, nor the results of any analysis of such a sample may be received as evidence in a criminal proceeding unless the sample was taken and the analysis made in accordance with M.G.L. 94:188 and 189.

PART B: PESTICIDES

(Includes Herbicides, Fungicides and Rodenticides)

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. Be familiar with the laws and regulations, including licensing and certificate requirements for dealers and users of pesticides. (See licenses and certification section below). In the following situations the board of health should have an understanding of pesticides, or else an awareness of whom to contact for help. (See Available Resources section at end of this section.)
 - a. The board of health, usually in conjunction with another local agency such as the housing authority, may be using pesticides itself. In this case, the board of health must know how to apply pesticides and comply with licensing and certification requirements. This holds true even if the board contracts for someone else to apply the pesticides.
 - b. The board of health may receive complaints from townspeople about improper disposal of pesticides, the drifting of sprayed pesticides away from their intended area of use, or any suspected poisoning or damage done by pesticides.
 - c. Townspeople may call the board of health requesting information about proper pesticide use, or licensing and certification requirements.

STATE RESPONSIBILITIES

1. The Massachusetts Department of Food and Agriculture regulates all aspects of pesticide use. As required by the Mass. Pesticide Control Act (M.G.L. 132B), the MDFA:
 - a. registers pesticide products
 - b. investigates mis-use, complaints, accidents, and field problems
 - c. licenses and certifies those who use or sell pesticides.

These are four types of credentials in Massachusetts:

Applicator licenses (for small commercial applicators who do not use restricted pesticides, or for employees in larger businesses who may use restricted pesticides when directly supervised by a certified person).

Dealer licenses to sell restricted pesticides.

Private certification cards (for anyone such as farmers, nurserymen, and greenhouse operators who produce any plant or animal product for sale and who use restricted pesticides).

Commercial certification cards (for anyone who uses or supervises the use of a restricted pesticide and who does not qualify for private applicator certification).

More complete information about licensing and certification requirements is contained in the pamphlet "Use of Pesticides in Massachusetts 1980" available from the U. Mass. Extension Service (see order form in appendix).

There are three distinct groups within the Department of Food and Agriculture involved in pesticide control:

- a. **The Pesticide Board** is a committee of 13 people who set policy on pesticide use. This group has the power to adopt pesticide regulations. The board is chaired by the commissioner of the Department of Food and Agriculture and consists of six governmental members and seven private citizens.

- b. **The Sub-Committee on Registration**, a subcommittee of the full Pesticide Board consisting of five members, has control over the registration of pesticide products. The subcommittee is chaired by the director of the Division of Food and Drugs of MDPH.
 - c. **Department of Food and Agriculture** staff carry out the actual work of testing, record keeping, and field investigation.
- 2. The Extension Service of the University of Massachusetts in Amherst does the following:
 - a. Provides a specialist in the Department of Entomology who assists groups having problems concerning pest control
 - b. Acts as a source of technical information about pesticides
 - c. Advises on individual cases
 - d. Publishes a newsletter *Pesticide News*, eight times a year
 - e. Provides, upon request, fliers dealing with a variety of pesticide issues. (See order form in appendix).
 - 3. The Department of Environmental Quality Engineering has promulgated regulations concerning:
 - a. Use of pesticides on watersheds of public water supplies
 - b. Use of anti-siphon devices
 - c. Restrictions on placement of materials in landfills (310 CMR 19.1[16]).
 - 4. Division of Water Pollution Control licenses haulers of hazardous wastes including waste pesticides.
 - 5. Division of Fisheries and Game has promulgated regulations concerning poisoning of certain birds and mammals.

FEDERAL RESPONSIBILITIES

- 1. **Environmental Protection Agency**
 - a. Review all pesticide products and determine which are safe by today's standards.
 - b. Categorize the products under either general or restricted use. General use refers to pesticides which may be sold to anyone. Restricted use applies to those pesticides which may not be used unless the user is certified.
 - c. Prosecute violators of pesticide regulations.
 - d. Confer with state pesticide authorities.
 - e. Identify and review those chemicals that seem to have potential reasons for not being re-registered.
 - f. Review each active ingredient in pesticides.
 - g. Decide which uses, concentrations and formulations should be restricted.
 - h. Require that only certified persons or those acting under the direct supervision of a certified person may purchase or use restricted use pesticides.
 - i. Require that dealers who sell restricted use pesticides be licensed to do so.
 - j. Require that dealers check each buyer of restricted use pesticides for a valid certification card.
 - k. Interpret the product label as a binding set of directions that must be followed exactly.
 - l. Inspect plants manufacturing pesticides.

2. **Federal Resource Recovery and Conservation Act** regulates hazardous wastes including waste pesticides.
3. **Safe Drinking Water Act** sets standards for drinking water purity including standards for several pesticides.
4. **Toxic Substance Control Act** regulates the use and manufacture of toxic chemicals including the raw materials used in formulating pesticides.
5. **Department of Transportation** regulates the shipping of certain toxic pesticides.

RATIONALE

There is a great deal of concern over how pesticides affect both those who work with them occupationally and people residing in areas of use.

While the hazards are not always clear cut, improper use of pesticides is a public health problem. Whether there will be injury or even absorption into the body's system is dependent on:

- a. the mode of exposure: inhalation, ingestion or contact
- b. the quantity taken, or intensity of exposure
- c. the time span of intake, including the intervals between intakes, which are critical for excretion and for recovery
- d. the physiological and emotional status of the individual, which determine his body's ability to cope with the toxicant
- e. synergistic or potentiating effects of other substances taken in concurrently.

Some of the suspected effects of substances such as 2, 4D and 2, 4, 5-T are birth defects, genetic mutations, and spontaneous abortions. Cancer has been found to be a long-term effect resulting from ingestion of products containing pesticide residues.¹

People most affected by pesticide use are those who work directly in agriculture and in manufacturing of pesticide products. Symptoms such as headache, stomach pain, dizziness, nausea, double vision and sterility have been reported.

Pesticide residues may or may not lose their toxicity depending on their chemical make-up. If the pesticide is not absorbed by the plant itself, it may accumulate in the soil or become dissolved in the runoff water that enters a stream or river.² If it remains in the plant, it may be ingested if the plant is used as a source of food.

Preventive Measures

The board may act to educate pesticide users and provide a program of alternatives to pesticide use. Teaching farmers to use other methods of insect eradication would decrease the risk of pesticide-related health problems.

Alternatives include:

- a. plant stripping — planting vegetation in alternating strips with another crop that insects prefer to feed on. This crop is planted to attract insects and should not be of agricultural value.
- b. alternating crops — planting different crops each year to prevent build-up of insect larvae.
- c. alternate insect infestation — *Bacillus thuringiensis* are lethal to caterpillars, for example, and have no effect on man.
- d. juvenile hormone inhibitors — use of a chemical that prevents the insect from development to the adult stage.

- e. chitin inhibitor — inhibits the protective shell of the insect from forming.
- f. sex-pheromone — attracts the males of a species to a bait which kills them.

The board may also adopt local regulations to control the use of pesticides within the municipality. If contamination of public or private water supplies is considered a potential problem, due to drift or runoff, the board may find it useful to prepare a map of private wells and other water supplies, and to prepare local regulations that consider water supply locations.

Available Resources

If the board of health cannot handle local pesticide situations itself, it may contact the county office of the extension service, or one of the following people:

- a. questions about licensing, special state regulations, fees, examinations, or complaints about the misuse of pesticides should be addressed to:

Lewis Wells, Pesticide Section
 Dept. Food and Agriculture
 100 Cambridge Street
 Boston, MA 02202
 (617) 727-7712, or 2863

- b. questions about pesticide use, disposal, accidents, special problems, training materials, or other technical information should be addressed to:

Roy Van Driesche, Extension Pesticide Specialist
 Fernald Hall, Dept. of Entomology
 University of Massachusetts
 Amherst, MA. 01003
 (413) 545-0932

A pesticide complaint form that may be used to describe a problem relating to pesticide use is provided in the appendices. See appendix II(a) for 1. List of county extension service offices 2. Pesticide complaint form 3. Order form for free fliers from U. Mass. Pesticide Program.

PART C: RADIATION

RECOMMENDED ACTIVITY OF THE BOARD OF HEALTH

1. **Contact the Radiation Control Program** of the Department of Public Health whenever there is any question or problem concerning radiation. This includes ionizing radiation, such as that found in medical, dental, educational, and research facilities and nuclear power facilities, and non-ionizing radiation such as microwaves, lasers, and radio waves.
2. Under Section 5B of Chapter 111 of the Massachusetts General Laws, MDPH has the authority to make rules and regulations concerning the transportation, storage, packaging, sale, distribution, production, and disposal of radioactive materials and machines which emit ionizing radiation. M.G.L. 111:5B specifies, "The Department of Public Health shall approve, modify or disapprove all proposed rules and regulations of political subdivisions of the Commonwealth in so far as they pertain to the health aspects of ionizing radiation and no such rules and regulations which do not have the approval of the department shall be adopted."

STATE RESPONSIBILITIES

1. **MDPH: Radiation Control Program**

- a. Control use of ionizing radiation in medical, dental, educational and research facilities.
- b. Control use of non-ionizing radiation, especially microwaves and lasers (lasers must be registered with MDPH). (See M.G.L. 111:5I.)
- c. Conduct environmental radiation surveillance studies, especially around nuclear power stations. (See M.G.L. 111:5H).
- d. Act as the lead agency for the assessment of incidents involving radiation.

2. **Nuclear Incident Advisory Team — NIAT (MDPH)**

NIAT is concerned with radiological emergencies and is a resource to the MDPH. NIAT was developed in the early 1960's by the Massachusetts Department of Public Health in cooperation with the Massachusetts Commission on Atomic Energy, Department of Public Safety, Department of Labor and Industries, and the New England Chapter of the Health Physics Society. The Team consists of employees and consulting experts in the various fields associated with radioactive materials, and its members are drawn from private, state, and federal institutions and industry. Local police and/or fire officials have 24-hour access to the NIAT through the Massachusetts State Police.

3. **Advisory Council on Radiation Protection** consists of the Commissioners of Public Health, Labor and Industries, Public Safety, and Administration, the personnel administrator, the Director of Civil Defense, and six persons to be appointed by the governor. Two of the six people must be doctors of medicine or dentistry and be specialists in the field of ionizing radiation injuries. One person must have training or experience in radiology, one in radiation or health physics, one in radiation law, and one in nuclear engineering or in the industrial application of ionizing radiation.

The Council considers and makes recommendations to the governor, the general court, and the various departments of the executive branch as to the development, growth and status of all substances and apparatus capable of emitting ionizing radiation within the Commonwealth.

4. **The New England Compact on Radiological Health Protection** allows the six New England states to assist each other in all areas of radiological health by the exchange of information, equipment, and personnel if needed. Enabling legislation to enter into the compact was enacted in each of the six New England states. (See M.G.L. 111:1-10.)
5. **Department of Labor and Industries** has established rules and regulations, effective November 15, 1978 for the protection of the health and safety of employees against ionizing radiation in any place of employment in the Commonwealth (441 CMR 3.00).

FEDERAL RESPONSIBILITIES

1. **The Department of Health and Human Services** (formerly Health, Education, and Welfare) must establish and carry out an electronic product radiation control program designed to protect the public health and safety from electronic product radiation (Ch. 42, Sec. 263D, Federal Code Annotated).
2. **The Nuclear Regulatory Commission** regulates licensing and use of radioactive isotopes in industry. They also conduct periodic inspections of industries using radioactive isotopes. The Commission licenses and regulates by-products of nuclear reactors, such as those used in power plants, hospitals, educational institutions and industry.
3. **The Environmental Protection Agency** sets standards for public exposure to radiation.

OTHER AGENCIES (NON-PROFIT)

1. **The National Council on Radiation Protection and Measurement** evaluates the effects of radiation on human life and establishes standards for permissible levels of radiation exposure.

RATIONALE

Ionizing radiation comes from medical and dental x-ray machines, radiation therapy devices, nuclear reactors, and radioactive materials either naturally occurring (such as radium-226, used in medical therapy), or man-made (such as Cobalt-60, also used in medicine). Injury to living matter by ionizing radiation is the result of the transfer of energy to individual molecules in the region through which the radiation passes. The radiation can knock electrons out of atoms, creating electronically charged ions that can affect normal biological functions. Depending on which molecules are affected and how many living cells may repair themselves completely or partially, remain unaffected, or die, the exposed tissue or organism may survive with or without defects, or die. If a damaged cell is one which would normally grow, divide and multiply rapidly, such effects as abnormal growth or mutation may appear relatively quickly and affect the health of the organism.

Health effects caused by radiation are in general proportional to the amount of exposure (although a single intense dose may be more harmful than the same total exposure over a long period of time). Intense doses (100 rems or more) may cause acute effects, including those symptoms referred to as radiation sickness, whereas low level exposure increases the risk of various diseases, primarily cancer and cataracts, which may not appear for five to 20 years after exposure. The risk associated with a given level of exposure is usually described in epidemiologic terms, such as the tentative estimate by the National Academy of Sciences that a single exposure of one rad (a level of radiation roughly comparable to 35 to 40 simultaneous chest x-rays) to one million people would be expected to cause 268 to 1,031 of them to have cancer (i.e. approximately one in a thousand). About one in three of these cases would be fatal. For comparison, about 162,500 fatal cancers affect each million people normally.

People in the United States are exposed to about 100 millirems of ionizing radiation from natural, background sources each year. ("Rem" is a unit for measuring the biological effects on a person from a dose of radiation. One rem equals 1,000 millirems.) On the average, people in the U.S. are exposed to about the same amount (100 millirems per year) from man-made sources. About 90 per cent of the average exposure from man-made sources comes from medical and dental x-rays and radioactive materials used for diagnosis and treatment of disease (such as radioactive "tracers" and radiation therapy used to treat cancer), while 10 percent comes from such sources as nuclear-weapons testing, nuclear-powered electric plants, industrial uses and consumer products. Patients who get large numbers of x-rays or undergo radiation therapy and workers in such occupations as mining of uranium and phosphates, radiation research, nuclear-power generation and x-ray technology may be exposed to radiation levels considerably higher than the average.

Non-ionizing radiation includes microwaves, lasers, light and radiowaves, and involves photons whose lower energy prevents ionization from occurring in the absorbent materials. The primary biologic effect of non-ionizing radiation is thermal — the absorbing material's temperature rises. (This is the principle of the microwave oven.) Other possible non-thermal effects of exposure to non-ionizing radiation are not well substantiated by tests or epidemiologic data.

Radiation control programs seek to reduce both **individual** exposure to non-therapeutic radiation and overall exposure of the population, in order to minimize the risk of negative health effects. Equipment and facilities used for research, therapy, industrial use, military use and power generation must be properly designed and properly used to minimize exposure of workers and hazardous leakage of radioactive materials to the environment. Radiation control programs also regulate safety mechanisms and emergency plans so that accidental exposure can be minimized and treated.

Local officials should encourage health care providers and any local users of radioactive materials to comply with state and federal regulatory authorities and to be prepared to deal with accidents involving radioactive materials. Reducing unnecessary x-rays, ensuring that x-ray diagnostic and therapy equipment is in good condition, and having adequate safety and emergency provisions can be constructive local objectives.

Any questions or problems concerning radiation should be directed to the following:

Massachusetts Department of Public Health
Radiation Control Program
Room 770
600 Washington Street
Boston, MA 02111
617-727-6214

or

Massachusetts Department of Public Health
Radiation Control Program
Western Mass. Public Health Center
University of Massachusetts
Amherst, MA 01003
413-545-2563 or 2564

RADIATION EXPOSURES

Category	Annual Dose Commitment (mR)*
Background (Massachusetts estimated)	
Cosmic	40-50
Terrestrial; K , U, Th, Rn ²²²	75
Internal; C , K , H ³ , Ra	25
Background (total estimated)	
Boston area (total from above)	125
Denver	200
Monzonite Sands (Brazil)	1000-2000
Fallout from Atmospheric Weapons Testing (1980 est.)	4
Medical	
Average (U.S. population)**	73-100

* mR means millirem (1000 millirems = 1 rem)

** 30% unnecessary

Source: MDPH Radiation Control Program

PART D;

HAZARDOUS WASTE MANAGEMENT AND DISPOSAL

BOARD OF HEALTH RESPONSIBILITIES

1. **Assign the site for a hazardous waste disposal facility** (M.G.L. 111:150B, adopted July 1980 in Statutes of 1980, Chapter 508, Section 4)
 - a. The site for a hazardous waste treatment or disposal facility must be assigned by the local board of health, after public hearing and public notice, except, in the case of an agency of the Commonwealth, the site must be assigned by DEQE.
 - b. The board of health must notify DEQE of receipt of an application to assign a place as a site for a facility, and may request technical assistance, guidance or advice from DEQE.
 - c. In determining whether or not to assign a place as a site for a hazardous waste disposal facility, the board must assess the significance and degree of danger to the public health, and must consider and evaluate evidence that any interested person may submit to it. The assignment is "subject to such limitation with respect to the extent, character and nature of operation thereof as will insure that the facility imposes no significantly greater danger to the public health or public safety from fire, explosion, pollution, discharge of hazardous substances, or other construction or operational factors than the dangers that currently exist in the conduct and operation of other industrial and commercial enterprises in the Commonwealth not engaged in the treatment, processing or disposal of hazardous waste, but utilizing processes that are comparable." (M.G.L. 111:150B, adopted July 1980, Chapter 508 of Acts of 1980).
 - d. Every decision of the board in assigning or refusing to assign a place as a site for a facility shall be in writing and shall include a statement of reasons and the facts relied upon by the board in reaching its decision.
 - e. Anyone may appeal the decision of the board of health in regard to the assignment of a site. If the board of health assigns a site, the appeal must be made to DEQE. If the board of health denies a site assignment, the appeal must be made to the superior court. All appeals must be made within 30 days. Site assignments may be modified, suspended, or rescinded.
2. **Notify the mayor and city council or board of selectmen** of pending applications for licenses for the collection, storage, treatment, or disposal of hazardous waste, upon notification from DEQE (Sec. 4 of Mass. Hazardous Waste Act, M.G.L. 21C:4).
3. **Notify the mayor and city council or board of selectmen** of information supplied annually by DEQE, identifying the types and quantities of hazardous waste generated, stored, treated, or disposed of within the town or city.
4. **Inspect hazardous waste disposal sites**, if deemed necessary, and report findings to DEQE.
5. As authorized agents of DEQE, may enter premises for purposes of investigating, sampling or inspecting any records, conditions, equipment, practice or property (M.G.L. 21C:8). A warrant must be sought if demanded by the person in control of the premises.

LOCAL ASSESSMENT COMMITTEE RESPONSIBILITIES

The **chief executive officer** of a city or town in which a developer intends to construct, maintain, and operate a hazardous waste facility must establish a local assessment committee, within 30 days of receipt of the developer's "notice of intent." The chairman of the board of health or his designee is a member of this committee (see M.G.L. 21D:5, included in Ch. 508, Acts of 1980, in the appendix). The powers and duties as defined in the statute are:

- i. To represent generally the best interests of the host community in all negotiations with the developers of proposed facilities in said community.

2. To negotiate with the developer the detailed terms, provisions, and conditions of a siting agreement to protect the public health, the public safety, and the environment of the host community, as well as to promote the fiscal welfare of said community through special benefits and compensation.
3. To receive and expend such technical assistance and planning grants as may be made available pursuant to Section 11 of M.G.L. 21D and such other funds as may become available for such purposes from any other source, public or private.
4. To enter into a nonassignable contract binding upon the host community, and enforceable against said host community in any court of competent jurisdiction, by the decision to sign a siting agreement pursuant to Section 13 of Chapter 21D of the General Laws.
5. To cooperate wherever possible with abutting communities in negotiations with the developer over compensation for said abutting communities.
6. To adopt such rules, regulations, procedures and standards as may be necessary to carry out its functions and perform its duties under this chapter (M.G.L. 21D).

The local assessment committee will deal primarily with the Hazardous Wastes Facility Site Safety Council, which is a part of the Department of Environmental Management's organizational structure.

STATE RESPONSIBILITIES:

DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING, DIVISION OF HAZARDOUS WASTE

The Massachusetts Hazardous Waste Management Act, Chapter 21C of the General Laws, provides for registration of generators, and licensing of haulers and disposers of hazardous wastes. DEQE must:

1. **Adopt standards and criteria** at least as stringent as the federal regulations promulgated by the Environmental Protection Agency under Sections 3001, 3002, and 3004 of the Solid Wastes Disposal Act as substantially amended by the Resource Conservation and Recovery Act of 1976 (RCRA, Public Law 94:580, Oct. 21, 1976; M.G.L. 21C). DEQE has the responsibility to adopt rules, regulations and standards (and the Commissioner may issue orders) regarding operation and maintenance of hazardous waste facilities (M.G.L. 111:150B) and treatment of hazardous waste both at the place of generation and at other facilities (M.G.L. 21C:7 as amended by Ch. 508, Section 2A of Acts of 1980).

Federal regulations were promulgated in May 1980. DEQE is responsible for promulgating regulations consistent with, and possibly stricter than, the federal EPA regulations. Violations of DEQE regulations, orders, or licenses are punishable by up to five years in jail and/or a \$25,000 fine.

2. **Issue licenses to construct, maintain and operate** hazardous waste facilities subject to the terms, restrictions, conditions and requirements established by DEQE (M.G.L. 21C:7 as amended by Chapter 508, Section 2A, Acts of 1980).
3. **Conduct a state-wide survey and compile and publish a list** of all sites in Massachusetts where hazardous waste has been deposited (Mass. Hazardous Waste Management Act, M.G.L. 21C:4).
4. **Register** persons who generate, and **license** those who treat, haul or dispose of hazardous wastes (Mass. Hazardous Waste Management Act, M.G.L. 21C: 4 and 7). Licenses are valid for no more than five years.
5. **Supervise the maintenance and operation** of all hazardous waste management facilities in order to ensure the public health, safety and welfare.
 - a. inspect facilities at least once a year.

- b. obtain samples as needed of any wastes and containers of wastes.
DEQE may enter any place where hazardous wastes are generated, stored, treated, transported or disposed of to inspect and obtain samples of wastes, containers or labels. State and local police, the Attorney General's Criminal Bureau, and DEQE have cooperated in surveillance and enforcement activities, particularly regarding illegal dumping.
6. **Coordinate research and development** pertaining to methods of hazardous waste management, and conduct appropriate studies relating to hazardous wastes (M.G.L. 21C:4).
7. **Give the local board of health a copy of each application** for a permit for the collection, storage, treatment, or disposal of hazardous waste (M.G.L. 21C:4).
8. **Furnish the local board of health with information** (annually) identifying the types and quantities of hazardous waste generated, stored, treated, or disposed within the town or city (M.G.L. 21C:4).
9. **Survey hazardous waste processing**, use, handling, storage, and disposal practices in Massachusetts and determine existing and expected rates of production of hazardous waste (M.G.L. 21C:4),.
10. **Provide, if advisable, a variety of information**, assistance, and planning functions. Suggested activities include creating a hazardous waste information clearing house, promoting recovery of resources from hazardous wastes, and offering technical assistance to state and local agencies in the planning and operating of hazardous wastes programs (M.G.L. 21C:4).

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (DEM), BUREAU OF SOLID WASTE DISPOSAL

Duties and powers defined by M.G.L. 21D, added by Ch. 508, Acts of 1980.

Chapter 21D, added by Ch. 508 of Acts of 1980 (July 1980), called the Massachusetts Hazardous Waste Facility Siting Act, provides a comprehensive process for statewide and local coordinated planning for siting and development of hazardous waste facilities. DEM must:

1. **Prepare and issue (annually) a statewide environmental impact report** describing and evaluating the hazardous waste management situation in the Commonwealth, and describing such feasible alternative solutions as may be available for the treatment, processing, and disposal of hazardous waste.
2. **Conduct public briefing sessions** about every proposal which the Hazardous Waste Siting Council has determined to be feasible and deserving of state assistance, to ensure participation of interested persons in the siting process and to inform the public.
3. **Solicit and evaluate proposals** for the construction, maintenance, and operation of a hazardous waste facility to treat, process or dispose of such shortfalls in capacity as may be indicated in the statewide environmental impact report.
4. **Disseminate information** widely throughout the Commonwealth on the treatment, processing, and disposal of hazardous waste, its impact on the economy of the Commonwealth, technology available, and benefits and potential dangers resulting from the use of each type of technology.
5. **Publicize all proposals** for development of hazardous waste facilities to inform the public and encourage the development of suggestions for sites.
6. **Adopt rules, regulations, procedures and standards** as necessary to carry out its powers and to perform the duties assigned the Department, after consultation and review by interested and affected persons and agencies, including DEQE, MDPH, the Hazardous Waste Facility Site Safety Council, and city and town officials including public health officers.

HAZARDOUS WASTE FACILITY SITE SAFETY COUNCIL

Established by M.G.L. 21D:4 (Chapter 508, Acts of 1980), the Council's powers and duties are as follows:

1. Observe the conduct and operation of the siting process established by M.G.L. 21D.
2. Review and make recommendations for changes of the rules, regulations, procedures and standards proposed by the Department of Environmental Management relating to the hazardous waste facility siting process (**prior** to adoption).
3. Review and comment on reports (prior to adoption and distribution) prepared by DEM.
4. Award technical assistance grants to cities and towns.
5. Cooperate with and obtain information from every agency of state or local government which may be concerned with any matter under the purview of the Council. Such agencies must provide information and recommendations as requested.
6. Review all proposals for construction and operation of hazardous waste facilities on proposed or suggested sites, and consult with DEQE before making recommendations.
7. Establish compensation to be paid by the developer to abutting communities.
8. Encourage and facilitate negotiations among the developer, host community, abutting communities and any other interested persons.
9. Determine if an impasse exists between the developer and the host community which may require submission of the matter to arbitration pursuant to M.G.L. 21D:15.

(The Hazardous Waste Facility Site Safety Council shall consist of 21 members, including one representative of the Massachusetts Municipal Association, one of the Massachusetts Health Officers Association, one of local boards of health, and one of the Associated Industries of Massachusetts. Others are representatives of the major interested state agencies, the general public, and three professional experts. The Council may appoint two residents of the host community for the purpose of participating in and voting upon matters relative to the site selection in that community.)

FEDERAL RESPONSIBILITIES

(from Resource Conservation and Recovery Act of 1976, PL 94:580 as amended)

1. Develop criteria for designation of wastes as hazardous, including toxicity, persistence or degradability in nature, potential for accumulation in tissue, flammability, and corrosiveness (Sec. 3001).
2. List wastes that are hazardous.
3. Set standards for industries that are generators of hazardous wastes.
The standards shall establish requirements for:
 - records, identifying quantities of hazardous wastes generated, harmful constituents of the wastes, and how they are disposed of.
 - use and labelling of appropriate containers.
 - use of a "manifest" system that assures that all hazardous wastes will be treated, stored, or disposed of in licensed facilities.
 - submission of reports to EPA outlining what hazardous wastes were generated and how they were disposed of (Sec. 3002).
4. Set standards for transporters of hazardous wastes and owners and operators of hazardous waste treatment, storage, and disposal facilities (Sec. 3003 and 3004).

5. Promulgate regulations requiring owners and operators of treatment, storage, or disposal of hazardous waste facilities to have a permit issued by the EPA or the state. In Massachusetts, the state will be the permitting authority when granted authorization by EPA (Sec. 3005).
6. Promulgate guidelines to assist states in the development of state hazardous waste programs. Any action taken under a state program authorized by EPA has as much force and effect as action taken by the EPA itself (Sec. 3006).
7. Section 3008 outlines federal enforcement powers and stiff criminal penalties for violations of the regulations (Sec. 3008).

NOTE: DEQE has the authority to adopt regulations at least as strict, or stricter, than the federal regulations. DEQE plans to adopt such regulations in the near future.

RATIONALE

Hazardous wastes are defined as those wastes that "because of their quantities, concentrations, or other characteristics may cause or significantly contribute to increased mortality or serious illness, or pose a hazard to human health, safety, and welfare or to the environment, when improperly treated, stored, transported, used, or disposed of" (M.G.L. 21C:2). Solid or dissolved material in domestic sewage, solid or dissolved materials in irrigation return flows, or industrial discharges that are point sources subject to permits under the Federal Water Pollution Control Act of 1967, and special nuclear or by-product material as defined by the Atomic Energy Acts of 1954, are exceptions in the federal statutory definition of hazardous wastes, because they are otherwise regulated.

Every year an estimated 57 million tons of hazardous wastes are generated in the United States, including 1 to 3 million tons in New England. There is, however, a critical shortage of currently approved hazardous waste disposal sites in New England, and it is estimated that 90 percent of the wastes are disposed of improperly — poured into sewers or on open land or improperly stored. Many incidents have already occurred in Massachusetts involving contamination of air and water by illegally and improperly disposed hazardous wastes.

The costs to individuals, communities and state and federal governments of coping with both health effects and cleaning operations have already mounted into the millions of dollars in Massachusetts, New York and other states where chemical dumps have contaminated water supplies, soil and even, in some cases, air. The potential costs of determining the linkages between various diseases and waste contamination and tracing the probable causes of diseases are also enormous — for example, the effort to measure the degree of chromosome damage to residents of the Love Canal area in New York that may be due to chemical contamination is complex, controversial and expensive.

Despite the known hazards and risks of illegal dumping, towns and cities have not been interested in assigning sites and allowing legal disposal of hazardous wastes within municipal boundaries, primarily because of fear that contamination would be likely to occur despite state and local regulations and controls. The legislation adopted in July 1980 (M.G.L. 21 D and M.G.L. 111:150B) provides both (1) rigorous requirements to ensure thorough **treatment** and adequate preparation for storage and disposal of hazardous wastes to minimize the risk of contamination from a facility, and (2) financial compensation to municipalities that become host communities for such facilities. The Special Legislative Commission that proposed the new guidelines asserted that the combination of compensation to the host community by the developer of a facility, binding arbitration where necessary, and state insistence on the most sophisticated and appropriate technology in treating and disposing of hazardous wastes were essential components of a program to break through the impasse between public necessity for adequate disposal and public resistance to local assignment of disposal sites.

Review of Regulatory Activity

Under the Federal Resource Conservation and Recovery Act, Environmental Protection Agency (EPA) has issued regulations to control the movement of hazardous wastes in the United States. The law

directs the EPA to identify what wastes are hazardous and in what quantities and concentrations they become a threat to health or the environment. The regulations:

- a. require industries to notify EPA of their hazardous waste production and disposal
- b. set design and engineering standards for hazardous waste treatment, storage and disposal facilities
- c. require permits for the operation of such facilities
- d. require generators of hazardous wastes to initiate a "manifest" system to track wastes from the point of generation to a proper disposal site. A "manifest" is a form used for identifying the quantity, composition and the origin, routing and destination of hazardous wastes from the point of generation to the point of disposal, treatment or storage.

The "Massachusetts Hazardous Waste Management Act," added by St. 1979, c. 704 s. 2 (M.G.L. 21C:1-12) was enacted "to provide adequate safeguards from the point of generation through handling, processing, and final disposition of certain hazardous wastes which threaten the public health and safety, or animal health and the environment, and to establish a statewide program to provide for the safe management of hazardous wastes." This landmark Act created the Division of Hazardous Waste within the Department of Environmental Quality Engineering to "manage" the heretofore unmanaged threats to our health and environment. New regulations must be written and enforced, criteria established and permits issued; a system must be created so that wastes can be tracked, abandoned hazardous waste sites must be identified, and the public must be consulted and involved.

An elaborate process for encouraging both adequate development and appropriate siting of hazardous waste facilities, to deal particularly with the shortfall in capacity known to exist, has been established by Chapter 508 of the Acts of 1980. This legislation amends M.G.L. 21C:4 and 7, and adds M.G.L. 21D (the Massachusetts Hazardous Waste Facility Siting Act), and M.G.L. 111:150B. The major responsibilities of the various involved agencies have been outlined above; please consult the entire act in the appendix for this chapter for further detail. Local responsibilities involve the board of health in the assignment process, and require that a "local assessment committee," including the chairman of the board of health or his/her designee, negotiate with a developer the detailed terms, provisions, and conditions of a "siting agreement." These two processes are legally independent of each other; neither local committee is bound by the other's action. It is expected that the "siting agreement" will usually be negotiated before the board of health determines whether or not it should assign the site.

The Hazardous Waste Facility Site Safety Council, including representatives of state agencies, the public, experts and local officials, will seek to expedite the process of finding suitable sites, through review of the statewide environmental impact report, and review and consideration of suggested sites and technologies for treating and disposing of hazardous waste.

Although the Council will play a major role in finding suitable sites, the primary determination will be made by the local assessment committees and boards of health. Lack of agreement between the local assessment committee and the developer may result in initiation of a formal, binding negotiation process. A refusal by the board of health to assign the site applied for may be appealed to the superior court. The board of health may refuse to assign a site only if it finds that the facility would impose "significantly greater danger to the public health or public safety . . . than the dangers that currently exist in the conduct and operation of other industrial and commercial enterprises in the Commonwealth not engaged in the treatment, processing or disposal of hazardous waste, but utilizing processes that are comparable." (Ch. 508, Sec. 4, Acts of 1980, M.G.L. 111:150B).

A Hazardous Waste Advisory Committee has also been appointed. It will meet monthly, will form task forces to deal with specific issues. Meetings will be open to the public. A representative of Mass. Health Officers' Association and a representative of the Mass. Public Health Association are members of this Committee. In the meantime, enforcement and clean-up efforts continue, and an ambitious groundwater testing program for the presence of 12 volatile chemicals has begun.

To keep up with the activities of the Division of Hazardous Waste, each board of health should be receiving the bi-monthly newsletter, *Hazardous Waste Update*. If you are not receiving this publication, request it from:

Division of Hazardous Waste, Attention: Update, DEQE, One Winter Street, Boston, Mass. 02108.

The Hazardous Waste Management Act also created a special set of definitions, including: disposal, facility, generator, hazardous waste, manifest, storage, transfer station, treatment. The Act requires DEQE to conduct a survey and prepare and publish a list of sites where hazardous waste has been deposited or abandoned. It is likely that boards of health will be asked to assist in such a survey.

Through its licensing powers as spelled out in the Act, and direct enforcement, DEQE and the Attorney General ultimately enforce the provisions of this Act and the numerous regulations to follow. Local boards of health, their agents/health officers, and their sanitarians and inspectors can assist in the comprehensive efforts to prevent contamination from hazardous wastes by

- informing other municipal departments of current regulations
- being an information and referral source for the public
- observing whether transport vehicles are properly identified with tags or registration plates
- reporting the movement of suspicious cargo to police
- reporting to DEQE known or suspected illegal dump or storage sites.

PROCEDURE FOR LICENSING

1. Facility use

- a. A developer may not construct a facility without first obtaining a siting agreement with the local assessment committee, a site assignment from the board of health, and a license from DEQE.
- b. Any site for the disposal of hazardous wastes as defined by DEQE, other than special permitted metallic sludges, requires that an Environmental Impact Report be filed with the Massachusetts Environmental Policy Act Office in the Executive Office of Environmental Affairs.
- c. The application to DEQE shall contain at least the following information: detailed engineering plans and specifications, operating and maintenance procedures; statement of the applicant's qualifications to manage and operate such a facility; plan for the closure and post-closure care of the facility and site; financial statement; statement of the amounts and types of waste to be received at the facility.
- d. DEQE shall require a hydrogeological study of the site area if it believes that a potential groundwater contamination problem exists.
- e. DEQE may add whatever condition it deems necessary to the licensing, such as a requirement that the applicant remain responsible for the long-term care of the site until DEQE certifies that the hazardous waste remaining at the site does not constitute a danger to the public or to the environment.

2. Disposal

- a. Before a license for the disposal of hazardous wastes is granted, a detailed set of maps of the disposal site and surrounding area must be submitted to DEQE.
- b. A detailed statement describing the quality and chemical analysis of the water in the area of the proposed site must be included.
- c. No license may be granted for the disposal of hazardous wastes at a site which overlies an actual, planned or potential underground drinking water source.

3. Transportation

DEQE must consult with the Department of Public Utilities with respect to the adoption, amendment, or repeal of regulations relating to the transportation of hazardous wastes.

- a. DEQE shall issue a license for the transport of hazardous waste only after the applicant has furnished a certification by the Department of Public Utilities that the applicant has conformed to all of its requirements.
- b. DEQE shall issue vehicle identification cards for each vehicle authorized to transport hazardous wastes. These cards must be in the vehicle at all times, readily accessible to the driver. Cards are issued for specific vehicles, are not transferable, and are valid for only one year.

4. Termination

DEQE may deny, suspend, or revoke a license at any time if it determines that any terms, conditions, requirements, or regulations have been violated, or if the applicant is not competent with respect to the licensed activity.

5. Enforcement and Penalties

- a. DEQE may issue an order of compliance whenever there is a violation of the Mass. Hazardous Waste Management Act, or any regulations issued under Sec. 9 of the Act. (M.G.L. 21C:9).
- b. A violator shall be punished by a fine of not more than \$25,000 or by imprisonment for not more than five years, or both, for each violation (M.G.L. 21C:10).
- c. A violator shall be subject to a civil penalty not to exceed \$25,000 for each such violation. Each day such violation occurs or continues shall be a separate offense.

References

"Hazardous Waste Update," bi-monthly publication of DEQE, Division of Hazardous Waste, One Winter Street, Boston, Mass. 02108 (617) 727-0774.

DEQE Speaker's Bureau and hazardous waste slide show, Public Information Office, DEQE, 100 Cambridge Street, 20th floor, Boston, MA 02202 (617)727-0170.

Facility Siting and Regional Speaker's Bureau, Executive Office of Environmental Affairs, 100 Cambridge Street, 20th floor, Boston, MA 02202 (617) 727-9800.

The New England Regional Commission's regional newsletter, Hazardous Waste Program, NERCOM, 53 State Street, Boston, MA 02109.

The Special Legislative Commission, State House, Room 212A, Boston, MA 02133 (617) 727-2916.

A Plan for Development of Hazardous Waste Management Facilities in the New England Region. Prepared under the Hazardous Waste Management Program of the New England Regional Commission by Arthur D. Little, Inc., 2 Volumes. September 1979. Available from NERCOM, 53 State Street, Boston, MA 02109 Cost \$7.60.

Chemical Contamination, by the Special Legislative Commission on Waste Supply, Commonwealth of Massachusetts. September 1979. Available from the Commission, 14 Beacon Street, Room 701, Boston, MA 02108. Free

Everybody's Problem: Hazardous Waste (SW-826), U.S. Environmental Protection Agency, 1980. Available from EPA Region I, Division of Air and Hazardous Materials, John F. Kennedy Building, 19th floor, Boston, MA 02203. Free.

PART E: OIL AND HAZARDOUS MATERIALS SPILLS

STATE RESPONSIBILITIES: DIVISION OF WATER POLLUTION CONTROL OF DEQE

SUMMARY OF THE OIL AND HAZARDOUS MATERIALS SPILL ACT

Chapter 705 of the Acts of 1979
(Recent amendment to Chapter 21, Section 27 of the General Laws)

Chapter 705 was signed into law on November 9, 1979. Its purpose is to provide the Commonwealth with "an immediate capability for responding to emergency situations involving spills and discharges of oil and hazardous materials." It authorizes the **Division of Water Pollution Control (DWPC)** to clean up such spills, and sets aside \$300,000 for them to do the job. Prior to this, no state agency was authorized to clean up hazardous waste; the DWPC and the Department of Environmental Quality Engineering had to go to the legislature for authorization and funds to clean up each incident.

According to the new Act:

"Hazardous material includes, but is not limited to, any material, including any discarded or waste material, in whatever form which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any other substance or substances, constitutes a present or potential hazard to human health, safety or welfare, or to the environment, when improperly treated, stored, transported, disposed of, or otherwise managed."

The main provisions of Chapter 705 are as follows:

Prompt Notification of Spill. As soon as a spill or leakage has been detected, the owner or operator of the faulty vessel, vehicle, railroad car, container, or facility must promptly notify the DWPC. Any person who fails to do so shall be fined up to \$5,000.

Immediate Cleanup. Any spill, seepage, or discharge that threatens state water, including groundwaters, must immediately be contained and removed by the best possible method. Chemicals are not to be used in the clean-up operation unless authorized by the DWPC.

Liability. All persons who caused the spill and owned/operated the hazardous material, transportation vehicle, or container will be liable for costs of investigating the spill and cleaning it up.

1. License all terminals in Massachusetts for the loading or discharge of petroleum products from vessels (M.G.L. 21: 50).
2. Issue reasonable rules and regulations relative to such terminals for the purpose of protecting the public safety and preventing spillage of the petroleum products into the waters of the commonwealth (M.G.L. 21: 50).
3. Inspect periodically hoses, gaskets, tanks, pipelines and other equipment to make sure that they are in good operating condition. The division may order replacement of equipment found to be unfit for use (M.G.L. 21:50).

4. Require that every owner or operator of an oil terminal or wharf employ a trained crew and have a boom available which can encircle any vessel depositing oil into receptacles of the terminal or wharf. The boom must be of a design approved by the Division, and is intended to prevent seepage, overflow, or excess oil from polluting the waters of the Commonwealth (M.G.L. 21:50A).
5. Require the owner/operator to encircle every ship or vessel depositing oil at his terminal or wharf with a boom when because of negligence repeated seepage, overflow, or excess oil has contaminated any water source (M.G.L. 21:50A).
6. Require that any vessel entering the waters of the Commonwealth for the purpose of discharging or receiving a cargo of any bulk petroleum product in the Commonwealth to post a bond with the division of at least \$25,000. The bond will be forfeited if it is found that the vessel has discharged oil into the water (M.G.L. 21:50B).
7. Require that every automobile service station, marina serving watercraft, and retail outlet selling automobile lubricating oil, install and maintain on the premises waste oil retention facilities. The facilities must be properly sheltered and protected to prevent spillage, seepage or discharge of the waste oil into storm or sanitary sewers or into the waters of the Commonwealth (M.G.L. 21:52A).

CHAPTER 9.

CHAPTER 9. Hazardous Materials and Wastes: Use, Handling and Disposal

Introduction
Hazardous Substances: Labeling, Use
Pesticides and Herbicides
Radiation Control
Hazardous Waste Management
Oil and Hazardous Materials Spills

CHAPTER 10

WATER PURITY AND QUALITY

DRINKING WATER SUPPLIES, PUBLIC AND PRIVATE BOARD OF HEALTH RESPONSIBILITIES

1. **Protect surface and groundwater sources** of drinking water supply from contamination.
 - a. Enforce Title 5 of the State Environmental Code, Minimum Requirements for the Subsurface Disposal of Sanitary Sewage, and other state and local regulations designed to prevent human and animal wastes and other polluting substances from contaminating drinking water supplies. Refer to M.G.L. 111:159-174A; section 159 designates DEQE as responsible for supervision of inland water; section 160 enables delegation of enforcement to boards of health and others.
 - b. Designate sites for sanitary landfill and hazardous waste disposal that will not be likely to contaminate public or private drinking water supplies. Attention should be given to:
 - i. whether or not the area is in or near an aquifer recharge area, or within the 100-year flood plain of a river or body of water
 - ii. soil conditions, water table and drainage of the site
 - iii. whether or not the site is within the watershed of a public water supply.
 - c. Report to DEQE the disposal or spilling of any toxic wastes in or around water supplies.

2. **Ensure that safe and adequate water supplies are available** in any place of habitation or where food or drink is served to the public (M.G.L. 111:122A).

Connection to a safe and adequate water supply is a prerequisite for licenses and permits of public and quasi-public places such as motels, campgrounds, bathing beaches, swimming pools, and schools. The board of health may order the discontinuation of use of an inadequate or unsafe water supply, and/or order the provision of a safe and adequate water supply. Refer to Drinking Water Regulations of Massachusetts (310 CMR 22) and consult DEQE for current water quality standards (see Appendix for Maximum Contaminant Levels).

3. **Use, when necessary, emergency powers** provided by the State Environmental Code, Title 1, 310 CMR 11.00 and State Sanitary Code, Chapter I, 105 CMR 400.200(B).

"Whenever an emergency exists in which the interest of protecting the public health or the environment requires that ordinary procedures be dispensed with, the board of health or its authorized agent, acting in accordance with the provisions of **Section 30 of Chapter 111 of the General Laws**, may, without notice or hearing, issue an order reciting the existence of the emergency and requiring that such action be taken as the board of health deems necessary to meet the emergency. Notwithstanding any other provision of this code, any person to whom such order is directed shall comply therewith within the time specified in the order. Each day's failure to comply with the order shall constitute a separate offense. Upon compliance with the order and within seven days after the day the order has been served, he may file a written petition in the office of the board of health requesting a hearing. He shall be granted a hearing as soon as possible (but not later than ten days after the filing of the petition). The procedure for such hearing shall otherwise conform with the hearing requirement which would have existed had the order been issued under non-emergency circumstances."

OTHER LOCAL RESPONSIBILITY

Section 28 of the Massachusetts Clean Waters Act (M.G.L. 21) authorizes the Division of Water Pollution Control to establish Water Pollution Abatement Districts (WPAD) consisting of one or more towns. The town selectmen must present the proposal for the town's inclusion in a WPAD before a Town Meeting within 90 days of receipt of the proposal from the Division of Water Pollution.

If the town votes against inclusion in the WPAD, the Division may order a hearing. After the hearing the Division may order the town to be included in the WPAD if it is deemed necessary for the prompt and efficient abatement of water pollution.

A district must submit a plan for water pollution abatement to the Division of Water Pollution Control within one year of its establishment. Among other things, the plan will include the sources of pollution within the district and the means proposed to end the pollution. Districts should be advised of available state planning grants that may be applied for through the Division.

When the plan has been approved, the Division will instruct the District to apply for a federal grant for a portion of the construction projects contained in the plan. The Division of Water Pollution Control has information about bonds that are issued to pay for the architect's portion of costs (M.G.L. 21:32).

Powers of the Water Pollution Abatement Districts (sec. 30 of Mass. Clean Water Act, M.G.L. 21:30):

1. Shall adopt by-laws and regulations for its conduct.
2. Shall adopt a name and corporate seal.
3. Shall provide revenue to carry out its purposes.
4. May act by a majority vote.
5. May sue and be sued.
6. May enter into contracts.
7. May incur expenses in order to carry out its purposes.
8. May issue bonds and notes.
9. May acquire, dispose of, and encumber real and personal property for the purposes of the district.
10. May manage, control, and supervise abatement facilities.
11. May construct, acquire, improve, and maintain and operate abatement facilities.
12. May exercise the power of eminent domain.
13. May apply for, accept and receive financial assistance from the federal and state governments: facilities for treating, neutralizing, or stabilizing sewage and industrial and other wastes that are disposed of through the facilities. These facilities include treatment and disposal plants, the necessary intercepting, outfall and outlet sewers, pumping stations and other necessary equipment.

RECOMMENDED LOCAL ACTIVITIES

Communicate and cooperate with town/city public works departments, conservation commissions and other town bodies to protect water supplies from contamination, including contamination from road salt, human and animal sources, industrial sources, recreational activities, etc.

STATE RESPONSIBILITIES, DEQE

1. Approve plans to initiate or improve a public water system (310 CMR 22.04, Drinking Water Regulations of Mass. and M.G.L. 111:17 as amended by Chap. 706 of the Acts of 1975).
2. Supervise and enforce the Drinking Water Regulations of Mass., based on the Safe Drinking Water Act of 1977.
3. Maintain an inventory of the state's public water systems.
4. Have a systematic program for conducting sanitary surveys.
5. Have a certification program for the laboratories that perform analytical tests on drinking water.
6. Review all requests for variances and exemptions and make appropriate decisions. This procedure includes:
 - a. obtaining agreement from water supplier on all points listed in regulations for variances (310 CMR 22.13) and exemptions of the Drinking Water Regulations of Mass. (310 CMR 22.14).
 - b. announcing intention to grant a variance or exemption to the public, MDPH and the EPA, and holding a public meeting. All variances and exemptions granted by the state must have an established projected schedule for bringing the system into compliance.
7. Maintain accurate records and submit annual reports to the EPA which include a summary of violations of public water systems and the status of all variances and exemptions (310 CMR 22.15).
8. Report all violations of the Drinking Water Regulations to the Department of Public Health. The two departments, MDPH and DEQE, will consult on appropriate enforcement actions (310 CMR 22.02).

PUBLIC WATER SUPPLIER RESPONSIBILITIES

1. Monitor water supply, using analytical methods and schedules outlined in 310 CMR 22:05 through 22:09 of the Drinking Water Regulations of Massachusetts.
2. Ensure that the contamination levels detailed in 310 CMR 22.05 through 22.09 are not exceeded.
3. Agree to conditions listed in 310 CMR 22.13 when applying for a variance.
4. Agree to conditions listed in 310 CMR 22.14 when applying for an exemption.
5. Meet reporting requirements (310 CMR 22.15).
6. Meet public notification requirements (310 CMR 22.16).
7. Maintain proper records (310 CMR 22.17).
8. Meet the distribution storage requirements (310 CMR 22.19).
9. Ensure that the conditions for surface water supplies and ground water supplies (outlined in 310 CMR 22.20 and 22.21) are met, through periodic inspections.
10. Report all violations of the regulations, such as the presence of contaminants, to DEQE upon discovery and in an annual report.



FEDERAL RESPONSIBILITIES

The Safe Drinking Water Act of 1977 required that the Environmental Protection Agency (EPA) establish regulations and guidelines for water quality, monitoring, testing, reporting and record keeping. The EPA is responsible for:

1. Ensuring that regulations are enforced by state agencies.
2. Intervening in the event the state agency does not enforce regulations (in such cases, civil law suits are brought against the offending water supplier).
3. Enforcing the Water Pollution Control Act (1972). The Water Pollution Control Act was established in order to achieve two goals:
 - a. water clean enough for swimming and other recreational uses and propagation of fish, shellfish and wildlife (by July 1983)
 - b. an end to the discharge of all pollutants into public waters (by 1985).

RATIONALE

Maintaining a water supply of good quality is one of the most important public activities in the community. Water contaminated by certain organisms may spread microbial disease, such as hepatitis, dysentery, typhoid fever, and cholera which can reach epidemic proportions (see the following chart). Other microorganisms, though non-pathogenic, may cause undesirable taste and odor in the water and may affect its appearance. Many chemicals may enter the water supply through drainage, leaching from landfill and toxic waste sites, and from industrial waste that can cause a multitude of health problems. Finally, there is a danger of radiation contamination to water that may also lead to serious health problems in the community.

The most effective method for ensuring the safety of drinking water is to conduct regularly a series of chemical, microbiological, and radiological analyses of the water. Testing procedures, monitoring requirements, and maximum contaminant levels are supplied in the tables in the appendix. As of January 1980, maximum contaminant levels (MCL's) had been established by the Safe Drinking Water Act for 35 contaminants. Other contaminants, especially synthetic organics which may be harmful, have been discovered in water supplies. Boards of health should request DEQE and MDPH assistance in determining the safety of water supplies if such contamination is found. The chart below provides a simple outline of what each category of analyses includes.



TYPES OF CONTAMINATION OF WATER SUPPLIES

Type of Analysis	Parameters of Contamination	Contaminant Examples
CHEMICAL	Mineral	calcium, magnesium, sodium potassium, iron, manganese, chloride, alkalinity, sulphates, hardness, silica, fluoride, pH, conductance, dissolved gases
	Physical	color, turbidity, odor, residue,
	Nutrient	organic nitrogen, ammonia, nitrate and nitrite, phosphorus
	Demand	COD, BOD, TOC, chlorine residual
	Trace Materials (Metals)	silver, barium, cadmium, copper, nickel, mercury, lead, zinc, tin, chromium, arsenic, selenium
	Toxic Substances (other than metals)	phenols, cyanides, sulfides
	Pesticides, Herbicides and Other Organics	hydrocarbons, chlorinated hydrocarbons, and organo-phosphorus compounds
What is Investigated		
MICROBIOLOGICAL	Total Coliform	
	Fecal Coliform	
	Standard Plate Count	standard plate count
RADIOLOGICAL	Radium 226 & 228 and gross alpha particles	
	Beta particles and photon radio-activity from man-made nuclides	tritium, strontium 89 and 90, iodine 131, cesium 134

WATERBORNE DISEASES TRANSMITTED BY INGESTION

Grouped by Types of Etiological Agent and Ranked by Likelihood of Transmission.

Disease	Agent	Comment
Bacterial agents		
Cholera	<i>Vibrio cholerae</i>	Initial wave of epidemic cholera is waterborne. Secondary cases and endemic cases are by contact, food, and flies.
Typhoid fever	<i>Salmonella typhi</i>	Principal vehicles are water and food. Case distribution of waterborne outbreaks has a defined pattern in time and place.
Bacillary dysentery (Shigellosis)	<i>Shigella dysenteriae</i>	Fecal-oral transmission with water often an agent. Direct contact, milk, food, and flies are other transmitters. Ample water for cleanliness facilitates prevention.
Paratyphoid fever	<i>Salmonella paratyphi</i> <i>Salmonella schottmulleri</i> <i>Salmonella hirschfeldii</i>	Few outbreaks are waterborne. Other fecal-oral circuits predominate. Ample pure water facilitates cleanliness.
Tularemia	<i>Pasteurella tularensis</i>	Most often transmitted by handling of infected animals and arthropod bites. Drinking contaminated water infects people.
Protozoan agent		
Amebic dysentery (amebiasis)	<i>Entamoeba histolytica</i>	Epidemics, which are rare, are mainly waterborne. Endemic cases are by personal contact, food and possibly flies.
Giardia enteritis	<i>Giardia lamblia</i>	Fecal contamination of water is usual mode of transmission; other fecal-oral transmission also frequent.
Viral agent		
Infectious hepatitis	A filterable virus, not isolated	Epidemics are due to transmission by water, milk, and food, including oysters and clams.

Adapted from: Chanlett, Emil T. *Environmental Protection*, New York: McGraw Hill Co., 1973, p. 76.

PUBLIC WATER SUPPLIES

Water supplies are classified as either public or private. While only the public water supplies are regulated by the State, the same standards of quality can and should be maintained for private supplies (see section below).

A public water system is any system, publicly or privately-owned which:

- has at least 15 service connections which are used at least 60 days a year.
- serves a minimum of 25 people at least 60 days a year.

The classification of Public Water Supply is broken down further into **community** and **non-community** systems. Community systems provide water to residents of the community, who use the water over a long period of time. Non-community systems generally provide water to travelers or other intermittent users. Examples of non-community water supplies would be those providing water to hotels, camps, gas stations, and restaurants. Though the regulations are not as strict for non-community supplies, it is recommended that the same standards be applied to both.

RECOMMENDED BOARD OF HEALTH ACTIVITIES RE: PUBLIC WATER SUPPLIES

1. Be alert to water-related health problems or possible contamination, including that by contaminants not yet regulated.
2. Request copies of:
 - water suppliers' annual reports which describe conditions of watersheds (the land surrounding the water source)
 - DEQE's sanitary survey.
3. Consult with representatives of DEQE when plans for improvements of an existing system or for starting a new system are proposed by a water supplier. The board of health can supply DEQE with relevant information about potential problems or needs concerning the water supply, and will be informed of any important developments by DEQE.
4. Promote cooperation with neighboring towns who share a water supply so that common problems may be more easily resolved.

PRIVATE WATER SUPPLIES

RECOMMENDED BOARD OF HEALTH ACTIVITIES RE PRIVATE WATER SUPPLIES

1. Maintain an inventory of the private wells in the community and make periodic inspections of the wells.
2. Make analyses of water from private supplies, or make arrangements to have the analyses done, upon request or when inspection reveals that there may be problems with the water supply.
3. Disinfect private wells when necessary or provide information on how to disinfect wells (see below for procedure to follow).

Boards of health have the authority to regulate private water supplies. In enforcement of the State Sanitary Code, and of regulations regarding food handling, the local board of health must ensure that

safe and adequate water supplies are in use. Standards of "safety and adequacy" mentioned in the Sanitary Code, and acceptable levels of contamination for certain contaminants may be found in the Drinking Water Regulations of Mass. A board of health concerned about potential contamination from other substances should contact DEQE or MDPH.

WELLS

Regulation

State law (M.G.L. 40:54) states that no well shall be used to supply more than one house, and the Environmental Code, Title 5, states that wells must be located 100 feet from subsurface sewage disposal leaching areas.

Boards of health may pass local regulations regarding water supplies, such as requiring well permits, water systems installation permits, and/or well, pump and water storage tank permits. Such regulations may include additional or more stringent criteria for location of wells, and may provide for board of health review of plans, chemical and bacterial analysis of water, a survey of soil and water table characteristics, and other relevant tests or standards.

Whether or not the board of health requires microbiological tests of new wells, it should urge all owners of new wells to have the water tested, since a poorly installed or constructed well may create chronic problems of contamination even if the underground supply is clean. The tests for bacteria are inexpensive and important.

Disinfection of Wells

The board of health should recommend the disinfection of wells (particularly shallow wells) in the following situations:

1. When a new well and its distribution system are made operational
2. When repairs to the well casing, pumping, or distribution system are complete
3. When seasonally used wells and/or associated pump and distribution systems are started for seasonal use
4. When an extended drought period has ended.

The Department of Environmental Quality Engineering recommends that the well be examined for contamination and proper construction **prior** to the disinfection procedure. Repairs and cleaning should take place at this time.

Where wells have been subject to pollution from surface drainage, foreign material or from construction activities on the well, the recommended procedure for disinfection is as follows:

1. Prepare a solution consisting of three gallons of water and one pint of 3 percent to 6 percent commercial chlorine solution (e.g., Clorox or other similar laundry bleach) and pour this mixture directly into the well.
2. Open all faucets in the building until an odor of chlorine is detected. Then close faucets for at least 10 hours. This will allow the chlorine to work on any bacteria in the pipes, storage tank, and well.
3. After this period, open faucets until the odor or taste of chlorine has disappeared.
4. It is suggested that a sample of the water be taken from a tap in the building at least 24 hours after the disinfection procedure is completed (odor or taste of chlorine disappeared) and be examined at a certified laboratory to determine if the problem has been corrected.

5. It is recommended that the water be examined periodically thereafter for the presence of coliform bacteria.

NOTE: The above procedure provides a high level of chlorine so the water from the well should not be used for drinking and culinary purposes, watering of livestock or for irrigation until the odor or taste of chlorine has disappeared.

Water Testing

Chemical and biological tests, especially the latter, should be performed on new private supplies and those of questionable quality. Radiological tests should be made if a problem is suspected. If the board of health does not provide laboratory analysis as part of its service, the samples should be sent to one of the approved laboratories listed in the appendix. Information on how to take a water sample is provided in the following pages. Many towns provide at least bacteriological tests as a service without charge, particularly if they can provide the tests in their own laboratories.

Bacteriological tests measure the number of coliform bacteria in the water, an indication of fecal contamination. Wells which are not constructed properly may permit the entrance of surface water that may be contaminated. Subsurface disposal of sewage within 100 feet of the well, and the disruption of subsurface formations during construction of sewage disposal facilities, may also contaminate the water.

Chemical tests are often requested when the water is found to have an odd taste, odor or color. Poor well construction, allowing surface water to drain into the well, may be the causative factor. DEQE or regional sanitarians may take water samples and conduct tests if industrial waste contamination or other major groundwater contamination problems are suspected. But in most cases, residents must take water samples to an approved private laboratory, or pay a fee to the board of health, for chemical tests.

The best way to avoid contamination of well water is to ensure that the well is properly located, installed and maintained. It is recommended that the board of health maintain an inventory of the community's private wells and conduct periodic inspections. The following list of questions is suggested to facilitate inspections of private wells:

1. Is there a sloping, concrete platform extending at least two feet in all directions from the well casing?
2. Is the curb of a dug well extended above ground level so that the well cannot be flooded, or capped and sealed subsurface?
3. Does the casing of a drilled well extend at least six inches above the ground and at least one inch above the concrete platform?
4. Is the casing watertight, durable, and of sufficient depth?
5. Is the connection between the casing and the pump watertight?
6. Is there a stuffing box for the pump rod?
7. Are all sewers located within 50 feet of the well watertight?
8. Is the well located at least 50 feet from any septic tank, 100 feet from septic system leaching facility, and 100 feet from any privy (310 CMR 15.03)?
9. Has a bacteriological analysis been made of the water?

WETLANDS AND WATERCOURSES: PROTECTION, POLLUTION ABATEMENT AND CONTROL

BOARD OF HEALTH RESPONSIBILITIES

1. Protect wetlands and watercourses from contamination from sewage disposal systems by enforcing the Environmental Code, Title 5, "Minimum Standards for Subsurface Disposal of Sanitary Sewage." Specifically,
 - a. Septic system leaching facility must be at least 50 feet from open water or wetlands and 100 feet from wells and drinking water supplies (310 CMR 15.03[7]).
 - b. Installation of subsurface disposal systems in fill is banned unless there are four feet of naturally occurring permeable soil below it, and disposal fields must be at least four feet above maximum ground water elevation.
2. Assign solid waste disposal sites so as to protect wetlands and watercourses. The Environmental Code bars use of wetlands for solid waste disposal unless:
 - a. The use of wetlands or flood plains is insignificant in importance.
 - b. No other area in the municipality is suitable for sanitary landfill.
 - c. The state Water Resources Commission predicts no significant effect on flood storage or pollution to subsurface waters.
 - d. The lowest point of refuse will be maintained at least four feet above maximum water level.

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. Work with local and state public works departments and, if necessary, pass local regulations to ensure proper storage and minimal use of road salt. Educate the community regarding health hazards from elevated sodium chloride levels in drinking water.
2. Cooperate with the conservation commission to ensure protection of wetlands and watercourses in order to promote the health and safety of the community and protect water supplies and fishing grounds.
3. Request that the conservation commission notify the board of health of any scheduled public hearings, and encourage the interchange of information about those hearings.
4. Notify the conservation commission of board of health hearings regarding issues of potential concern to the commission.
5. If dissatisfied with an action, decision, order or failure to act of the conservation commission, the board of health may appeal the matter to the DEQE regional office.

CONSERVATION COMMISSION RESPONSIBILITIES¹

1. Respond to any **Request to Determine Applicability of the Wetland Protection Act** for a particular project (Wetlands Protection Act, M.G.L. 131:40). If it is decided by the Conservation Commission that the Wetlands Protection Act applies to an area proposed for alteration, the applicant must submit completed copies of the **Notice of Intent Form** and **Environmental Data Form** to the Conservation Commission and to DEQE.
2. Hold a public hearing within 21 days of receipt of Notice of Intent.
3. Within 21 days of the public hearing, issue an Order of Conditions regulating the project. This order may be appealed by asking DEQE Regional Officer to reconsider the action of the Conservation Commission and issue a **Superceding Order of Conditions**.
4. Issue a **Cease and Desist Order** or seek a court injunction to halt a project if it is begun without compliance with the Wetlands Protection Act.

OTHER LOCAL RESPONSIBILITY

Section 28 of the Massachusetts Clean Waters Act (M.G.L. 21:28) authorizes the Division of Water Pollution Control to establish Water Pollution Abatement Districts (WPAD) consisting of one or more towns. The town selectmen must present the proposal for the town's inclusion in a WPAD before a Town Meeting within 90 days of receipt of the proposal from the Division of Water Pollution.

If the town votes against inclusion in the WPAD, the Division may order a hearing. After the hearing, the Division may order the town to be included in the WPAD if it is deemed necessary for the prompt and efficient abatement of water pollution.

A district must submit a plan for water pollution abatement to the Division of Water Pollution Control within one year of its establishment. Among other things, the plan will include three sources of pollution within the district and the means proposed to end the pollution. Districts should be advised of available state planning grants for which they may apply through the Division.

When the plan has been approved, the Division will instruct the district to apply for a federal grant for a portion of the construction projects contained in the plan. The Division of Water Pollution Control has information about bonds that are issued to pay for the architect's portion of costs (M.G.L. 21:32).

Powers of the Water Pollution Abatement Districts (Section 30, Massachusetts Clean Waters Act, M.G.L. 21:30):

1. Shall adopt by-laws and regulations for its conduct.
2. Shall adopt a name and corporate seal.
3. Shall provide revenue to carry out its purposes.
4. May act by a majority vote.
5. May sue and be sued.
6. May enter into contracts.
7. May incur expenses to carry out its purposes.
8. May issue bonds and notes.
9. May acquire, dispose of, and encumber real and personal property for the purposes of the district.
10. May manage, control, and supervise abatement facilities.
11. May construct, acquire, improve, and maintain and operate abatement facilities.
12. May exercise the power of eminent domain.
13. May apply for, accept, and receive financial assistance from the federal and state governments for facilities for treating, neutralizing, or stabilizing sewage and industrial and other wastes that are disposed of through the facilities. These facilities include treatment and disposal plants, the necessary intercepting, outfall, and outlet sewers, pumping stations and other necessary equipment.

STATE RESPONSIBILITIES (DEQE and MDPH)

1. Under the Wetlands Protection Act (M.G.L. 131:40), DEQE must:
 - a. Assist local Conservation Commissions in administration of the Act or in the event that no Conservation Commission has been appointed, assist the Board of Selectmen or the mayor in administration of the Act.
 - b. Review appeals of negative **Determination of Applicability of the Wetlands Protection Act** (i.e., if Conservation Commission determines that an area is **not** subject to the act, a citizen may appeal to DEQE).
 - c. Serve as an appeals agent to review the local **Orders of Conditions** by Conservation Commissions.
 - d. DEQE may assume jurisdiction over a case even though no party has appealed to it. DEQE is empowered to issue a Cease and Desist Order for violation of the Act, or bring suit against the violator, or file for criminal penalties when appropriate.

2. Under the Massachusetts Clean Water Act (M.G.L. 21:27), the Division of Water Pollution Control of DEQE must:
 - a. Encourage, among towns and other users of water, plans to prevent and control water pollution.
 - b. Cooperate with other agencies concerned with water pollution and assist towns or any institutions within the state with any water pollution problems they have.
 - c. Conform with PL 92-500 (Federal Water Pollution Control Act) and all other federal legislation pertaining to water pollution control.
 - d. Conduct a program of study, research, and demonstration relating to new and improved methods of water pollution control.
 - e. Adopt standards of minimum water quality for various waters in Massachusetts with approval of Commissioner of Public Health.
 - f. Prescribe effluent limitations, prohibit discharges when appropriate, and issue permits for programs and procedures for the management and disposal of pollutants.
 - g. Require dischargers to establish monitoring, sampling, record keeping and reporting procedures and facilities, and require them to submit related data.
 - h. Examine periodically the water quality of all the state's watercourses, coastal waters, and publish the results along with the various water quality standards.
 - i. Adopt regulations requiring proper operation and maintenance of waste treatment facilities.
 - j. Conduct a continuing planning process for reducing, controlling, and eliminating discharges into all waters of the state.
 - k. Arrange for continuing education for all personnel engaged in water pollution control.
 - l. Adopt, amend, or repeal rules and regulations as necessary for the effective administration of laws relating to water pollution control, including regulations to control or prevent discharge waste from watercraft.
 - m. Approve all reports and plans for pollution control facilities and inspect the construction of these facilities to ensure that they comply with plans.
 - n. Contain and remove, by whatever method it considers best, oil which has been discharged into any of the state's waters, and determine responsibility for the discharge.
3. As stated above (2e), the Commissioner of Public Health must approve the minimum standards for water quality defined by DEQE.
4. MDPH may advise DEQE or local boards of health regarding possible health effects of contaminants, and must ensure that boards of health are carrying out their responsibilities regarding safe and sanitary water supplies in dwellings, food service establishments, camps, etc.

FEDERAL RESPONSIBILITIES

The U.S. Army Corps of Engineers is responsible for issuing permits under the **404 Dredge and Fill Permit Program** as authorized by Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500, S. 404). This program was reaffirmed in the Clean Water Act of 1977.

The EPA has developed environmental guidelines to evaluate the discharges of dredged and fill materials into the nation's waters. EPA also reviews permit applications, monitors dredge and fill discharge operations and approves state programs.

Certain activities affecting wetlands have been authorized by nationwide permits and general permits, that are, in effect, blanket permits eliminating the need to process many individual applications. One should contact the U.S. Army Corps of Engineers District Office or the Regional EPA 404 Coordinator to see whether application for a permit is necessary.

The government and private citizens may sue to enforce permit requirements. If work is done without a permit where one is required, the violation may be subject to court action, including an injunction against continuing work, or an order to restore the area to its original state.

RATIONALE

Besides having clear responsibility for preventing contamination of wetlands or watercourses by sewage or landfill runoff and leachate, boards of health must be concerned about potential health effects of pollution from all sources, and must be aware of the need to preserve and protect wetlands and watercourses from abuse, so that they can retain their water-purification and flood-prevention characteristics.

Only recently has the ecological importance of wetlands become fully understood. Wetlands were often considered a nuisance, or inexpensive land that could be drained or filled and developed without consequence. Owners of wetlands were free to alter their land as they wished, regardless of the potential harm to the environment or to nearby property owners.

Scientists, legislators, and the general public have now developed a better understanding of the critical role of wetlands in the environment. Inland and coastal wetlands, including swamps, marshes, flood plains, dunes and tidal flats, are important natural resources. Altering or eliminating these resources can lead to serious problems including pollution or reduction of available water supplies, increased property damage from floods and storms, and reduced yield from shellfish areas or fishing grounds.

The board of health may take action if disease-bearing or disease-causing contaminants are involved. The Conservation Commission may also consider other pollution problems, such as nutrients, salts, heavy metals, PCB's and siltation.

In addition to drinking, the most obvious need for pure water, many other activities necessitate a large supply of clear, fresh water. Household use of water alone, including bathing, laundering, and watering plants, amounts to approximately 50 gallons per day for each person in the home, or 10 billion gallons annually in the U.S. To irrigate one acre of farmland requires 75,000 gallons of water, and total irrigation in the U.S. amounts to about 141 billion gallons daily. Industry is the largest user of water, using about 200 billion gallons daily. Two hundred gallons of water are needed to manufacture \$1 worth of paper, 65,000 gallons are used to manufacture one automobile, and 600,000 gallons are used to make one ton of synthetic rubber.

Altogether, the U.S. uses over 500 billion gallons per day and the projected need for the year 2000 is 969 billion gallons daily. Fortunately only about one-third of the water used is actually lost, through evaporation and transpiration. However, since water must be reused repeatedly, there has to be a means of ensuring that it is clean enough for the various uses it is put to, such as drinking, industry, and agriculture.

There are four basic sources of water pollution: sewage, industrial wastes, land drainage, and recreation. The following list classifies the pollutants produced by these sources into eight broad categories. For each category, the common sources and known or suspected effects are summarized.

Categories of Pollutants Entering Watercourses:²

1. **Domestic Sewage and Other Oxygen-Demanding Wastes.** These wastes are ordinarily reduced to stable compounds through the action of aerobic bacteria that require and obtain oxygen from the water. At excessive residue levels, however, the resultant oxygen reduction can have serious impact on the life in the water. According to the National Academy of Sciences, the oxygen-demanding fraction of domestic and industrial wastes is growing much more rapidly than the efficiency of waste treatment. The first massive warning was seen in Lake Erie where most of the lake's center was robbed of its oxygen content and aquatic life was catastrophically diminished.
2. **Infectious Agents.** Modern disinfection techniques have greatly reduced the dangers from disease-causing organisms. All of the threats have not been removed, however. For instance, the filtering mechanisms are quite effective in removing bacteria but not viruses. Health authorities are constantly wary of diseases such as infectious hepatitis, the virus of which is suspected of being waterborne. Another threat from infectious agents arises when heavy runoff overloads the treatment facilities of those cities that maintain combination storm drains and sewers, so that raw sewage enters the watercourses.
3. **Plant Nutrients.** In small, moderate amounts these pose no problem, but the nitrates and phosphates present in domestic, industrial, and agricultural wastes are so concentrated that they encourage excess proliferation of algae and plant growth. This in turn causes changes in the color and taste of water, alters aquatic life, and interferes with proper utilization of waterways.

4. **Organic Chemicals from Insecticides, Pesticides, and Detergents.** These substances are usually very toxic at low concentrations and have been responsible for spectacular kills of fish and wildlife. Adequate information on long-term exposure to these products is lacking, and efforts to treat or remove them from water supplies have been largely unsuccessful. Teratogenic and carcinogenic effects are suspected of some organic compounds.
5. **Other Minerals and Chemicals.** Industrial wastes include chemical residues, petrochemicals, salts, acids, and sludges. In combination with other pollutants they form more chemical entities. Many in this group are known to be toxic or carcinogenic. Methods of removal are poorly developed.
6. **Sediments from Land Erosion.** This additional loss of natural resource necessitates expensive treatment of water supplies, reduces a stream's ability to assimilate oxygen-demanding wastes, and covers fish nests and food organisms.
7. **Radioactive substances.** Although contamination from this source is minimal at present, the anticipated increase in nuclear power reactors poses increased risk of accidents that could cause pollution problems.
8. **Heat from Power and Industrial Plants** The amount of dissolved oxygen that water can contain decreases as the water temperature increases. Introducing heat into a stream, then, has an effect equivalent to that of introducing oxygen-consuming waste. This lowers the ability of water to purify itself and presents a serious threat for fish and other aquatic life.

Preventive Measures³

Measures to prevent water pollution are of two sorts: protection of the water source and delivery system, and treatment of sewage and waste water before it enters the watercourse. Sources may be protected by controlling the inflow of impure water, mainly sewage, into the water supply; by restricting the use of land in the watershed; by close supervision of sewage wastewater disposal in the watersheds and along rivers; and by prohibiting boating, swimming, and fishing in water supply reservoirs. Most control measures are concerned with bacterial contamination and suspended pollutants. Radioactive pollutants are being supervised through the licensing of radio-nuclide use, nuclear power plant operation and radioactive waste disposal. Licensing certainly does not eliminate all risk. The most serious problem is with toxic chemicals and suspended chemicals that enter the water supply from factory or as wastewater or runoff from land where herbicides and pesticides have been applied.

The other element of prevention, water treatment, is seen at its most basic level in the chlorination of water. Treated, safe water may become contaminated during distribution through corroded or cracked pipes. Chlorination decontaminates such incidental pollution that may occur between the source or treatment plant and the consumers' taps.

Water treatment plants are designed to treat sewage and waste water so that they are of a desirable quality. Treatment plants employ various processes such as aeration, flash-mixing, flocculation, settling, and filtration to achieve this objective. However, certain wastes need more specialized treatment; major problems are caused when this treatment is not available.

The use of lakes and rivers for recreation necessitates careful planning on the part of the town or association of towns. Often a town is eager to develop the area around a lake or pond and may not consider the added water use that development brings. Poor drainage, the need for fire protection, drinking water supply, and waste control and disposal are all problems that arise when areas are developed. In 1970, 4.9 million boats were registered with the U.S. Coast Guard and of these, only 10 percent had toilets of some kind.

Towns are advised to cooperate in the control of boat traffic on waterways in the control of the development of camps and other facilities along the shore. The board of health should view itself as a primary regulatory authority.

ROAD SALT USE AND STORAGE

Use of salt to melt ice on roads has contributed substantially to the sodium chloride levels in water supplies, in some cases making water supplies undrinkable. Runoff of salt applied to roads and runoff from storage piles of salt/sand mixtures go into streams and rivers, lakes and ground water, thus affecting private and public drinking water supplies. Salt-laden snow removed from streets and roads and dumped directly into wetlands, on the banks of water courses, or within close proximity to waterways may contaminate aquifers or open water bodies.

M.G.L. 85:7A of the Massachusetts General Laws gives the Department of Environmental Quality Engineering authority to regulate the storage of road salt, and requires that towns and cities submit annual reports describing how salt is stored and how much is used by road sections. Until now, towns and cities have not been submitting their reports diligently. They are strongly urged to submit reports as a means of helping DEQE identify problem areas in the state.

The following recommendations to cities and towns are designed to promote clean and safe drinking water supplies, wetlands and water courses:

Recommended Actions for Towns and Cities

1. Seek state and local funds for the construction of salt storage sheds, or at least ensure that salt is covered and stored on a bituminous concrete pad and located in an area where adequate drainage is ensured.
2. Salt should not be stored in the immediate vicinity of private or municipal wells, surface water bodies, or aquifer recharge areas. Adequate distances from the above should be provided.
3. Identification, site analysis, and location of snow dumping areas should be considered to ensure that no further environmental degradation of open water bodies or aquifers occurs.
4. All municipalities should develop maps of local drainage basins and road networks showing locations of salt sensitive areas (aquifers, wells, streams) and develop a program of salt use that designates certain areas to receive sand only or a greater ratio of sand to salt in the mixture.
5. Increased communication between state and town officials should be sought as well as compliance on the part of DPW regarding salt and sensitive areas.
6. Training of highway crews in salt application procedures and notification and education of local citizens about their responsibility during special driving conditions should be undertaken by local officials.

Increased awareness of the potential hazards of salt usage has led the Massachusetts Dept. of Public Works to reduce considerably its salt usage to 13 tons per land-mile per year. MDPW has reduced the frequency of application, used improved automatic devices to control the amount of salt applied, and increased the emphasis on treating ice-sensitive areas such as bridge decks, steep grades, and windswept areas. Towns and cities are encouraged to adopt these measures.

RESOURCES AND REFERENCES

Resources:

Mass. Dept. of Environmental Quality Engineering Division of Water Supply:
Commissioner, Boston, Mass. 727-2658
Regional Offices,

Northeastern: Tewksbury State Hospital,
Tewksbury, MA (617) 851-7261

Southeastern: Lakeville Hospital
Middleboro, MA (617) 947-1231

Central: 75 Grove St., Worcester, MA
(617) 754-3226

Western: University of Massachusetts
Amherst, MA (413) 549-1917

Division of Water Pollution Control:

Southeast Regional Office
P.O. Box 537,
North Pembroke, MA 826-2424, 727-9675

Eastern Regional Office
323 New Boston St., Woburn, MA
(617) 727-63673, (617) 727-0792

Western Regional Office
Draper Hall,
University of Massachusetts
Amherst, MA (413) 549-1755

Water Quality Section
P.O. Box 545, Westboro, MA
(617) 366-9181, 366-9182

Mass. Dept. of Public Health
Commissioner for Environmental Protection
600 Washington Street
Boston, MA (617) 727-2660

U.S. Environmental Protection Agency
Regional Office
JFK Federal Building, Boston, MA
Public Awareness and General Information (617) 223-7223

Water Programs Division:

Municipal Facilities Branch (617) 223-7213
Water Quality Branch (617) 223-5130
Water Supply Branch (617) 223-6486

References:

- Freedman, B. *Sanitarian's Handbook; Theory and Administrative Practice for Environmental Health*. New Orleans: Peerless Publishing Co. 1976.
- Salvato, J. A., Jr. *Environmental Engineering and Sanitation*. New York: Wiley Interscience, 1972.
- Coleman, J., Kline, E. "A Guide to Understanding and Administering the Mass. Wetland Protection Act," Mass. Audubon Society, June 1977.
- Fossett, J. A. "Administration and Enforcement of Title 5 via Intermunicipal Health Officers: An Attractive Alternative for Growing Massachusetts Towns," paper prepared for "208 Water Quality Planning for Franklin, Hampshire, Hampden Counties," available through Lower Pioneer Valley-Regional Planning Commission, 26 Central Street, West Springfield, MA 01089.

CHAPTER 10.

CHAPTER 10. Water Purity and Quality

Drinking Water Supplies, Public and Private

Wetlands and Watercourses:

Protection, Pollution Abatement and Control

Road Salt Use and Storage

CHAPTER 11

AIR QUALITY AND NOISE CONTROL

PART A: AIR POLLUTION CONTROL

BOARD OF HEALTH RESPONSIBILITIES

1. **Receive complaints** regarding alleged damaging, irritating, injurious effects of atmospheric pollution within the municipality.
2. **Determine** whether atmospheric pollutant is emitted from source(s) within the municipality.
3. If the effects and source(s) are in the municipality, and the authority of the board of health is clear, **order the responsible person to abate the emissions** as authorized in M.G.L. 111:316, 122, 131.
4. If the effects and/or sources are beyond the bounds of the municipality, **refer the complaint to the director of the local Air Pollution Control District (APCD)**, DEQE (M.G.L. 111:142D).

BOARD OF HEALTH RECOMMENDED ACTIVITY

1. Annually, or any time when significant changes are needed, **review and modify atmospheric pollution control regulations**. Hold public hearings regarding proposed changes, then submit to DEQE for approval (M.G.L. 111:31C).
2. **Maintain a current copy** of the local APCD **Ambient Air Quality Standards and Plan for Implementation, Maintenance and Attainment of Such Standards**, for public information. Channel new information regarding standards and implementation plans to other municipal boards and commissions, such as, selectmen, planning and zoning, public works, conservation.
3. **Maintain emergency plan** for communication with the director of the local APCD, and the commissioner of DEQE.
4. **Maintain liaison** with special or ad hoc municipal/district committees regarding atmospheric pollution problems, and regarding plans for atmospheric pollution control.

STATE RESPONSIBILITIES (DEQE)

1. Adopt and amend regulations to prevent pollution or contamination of the atmosphere, and enforce compliance by municipal and corporate offenders (M.G.L. 111:142A). Regulations include: Ambient Air Quality, Standards for the Commonwealth of Massachusetts (310 CMR 6.00), Air Pollution Regulations (310 CMR 7.00), and Regulations for the Prevention and/or Abatement of Air Pollution Incident Emergencies (310 CMR 8.00).
2. Operate and staff Air Pollution Control Districts (APCDs) to enforce the above regulations. See Exhibit A for map of Air Pollution Control Districts.

FEDERAL RESPONSIBILITIES

1. The U.S. Environment Protection Agency (EPA) has Federal Air Quality Control Regions compatible with the state Air Pollution Control Districts, which monitor air quality and enforce the National Ambient Air Quality Standards (1971) pursuant to the Air Quality Act of 1967, as modified.

RATIONALE

Bad-smelling vapors (miasmas) rising from decaying matter were believed to be the cause of yellow fever epidemics. Romans called such bad smelling airs malaria. To combat "bad air" and thus control disease were major motivations for the early establishment of boards of health. The General Court of Massachusetts empowered boards of health under M.G.L. 111:122 to make regulations, to enter buildings and ships and to destroy, remove or prevent offensive matter.

The miasmas of yesteryear were usually local phenomena; the miasmas of today extend statewide, nationwide, and internationally. In the past, miasmas were essentially from biologic sources; today our bad air is caused by chemical effluents and atmospheric chemical reactions. To cope with these more complex and far-flung aerial pollutants, M.G.L. 111:122 has been re-enforced with sections 31C, 129, 131, 142A-E. These sections clarify the legal actions that boards of health and DEQE may require for abating injurious pollutants.

Administratively, the personnel of the board of health and the Air Pollution Control District have a common mission in reasonably separated jurisdictions. Where the pollution source is clearly within municipal boundaries, the board of health (usually with the technical assistance from APCD personnel) can identify pollutants and enforce pollution standards. Where the source of pollution affects neighboring municipalities, DEQE enforces pollution standards. District and board of health personnel may cooperate in collection of relevant data regarding source emissions.

The board of health and DEQE both have responsibilities regarding assignment of sites for noisome trades, that affect air quality, as described in M.G.L. 111:143.

Since air quality is affected by sources of pollution beyond state boundaries, federal agencies impose the Air Quality Act of 1967, as most recently modified. The National Ambient Air Quality Standards (1971) are implemented by US EPA through Federal Air Quality Control Regions compatible with the states' Air Pollution Control Districts.

Our air is contaminated by particulate matter, sulfur oxides, carbon monoxide, nitrogen oxides, and photo-chemical oxidants/ozone. In 1976, 13.4 million metric tons of particulate matter were discharged to the atmosphere. About 80 percent of this quantity originated from point sources, such as mineral production, electric power generation, industrial fuel use, and primary metal production.

Epidemiologists have observed health responses of equivalent population groups (cross-sectional studies) to long-term air pollution exposures and compared types and rates of respiratory illness. In one study, chronic bronchitis rates were higher in Birmingham, Alabama, a city that was relatively polluted with suspended particulate matter, than in Charlotte, North Carolina, a relatively clean city by suspended particulate matter measurements.

Residents of New York City, polluted by suspended particulate matter and sulfur dioxide, have been compared to residents of Riverhead, Long Island, where pollution levels of these pollutants were much lower, as were the chronic bronchitis rates. To emphasize the rationale of air pollution control measures, the following paragraph is quoted: "In 1972, two years after the first-round study... reported prevalence rates of chronic bronchitis in New York City generally dropped quite considerably (from rates reported in the first study). This finding is consistent with the hypothesis that vigorous pollution control measures instituted by New York City in the late 1960's were beginning to have beneficial effects on public health by the early 1970's."¹

It is encouraging to have some proof that there are payoffs for pollution control efforts; it is discouraging that to measure health benefits requires 10-year lag time. Encouraging words come from another epidemiologist: "The nature of air pollution in America has changed significantly over the past 10-15 years. The classic air pollution episodes of the past, such as in New York City and Donora, Penn., are no longer a threat. The problems of acute respiratory distress caused by air pollution are of declining importance and we can now turn our attention to the chronic problems caused by long exposures to low levels of pollution."²

The long-range problems now include small particulates difficult to filter, sulfuric and organic compounds, heavy metals and other pollutants. "Between 1940 and 1970, the total nationwide emissions of all the major regulated air pollutants grew substantially — controllable particulate emission increased about 15%, sulfur dioxide increased about 50%, carbon monoxide more than doubled, and nitrogen oxide emissions quadrupled. Since 1970, however, air pollution control programs appear to be stemming the growth."³

These trends definitely indicate the need for on-going standardized air quality monitoring and the further need to focus on heavy metal and organic compounds in our ambient air. Pulmonary function studies may become a more important means for measuring health effects of air pollution as reproducibility and sensitivity increase and cost per test decreases. This approach is more desirable than waiting for symptoms of chronic bronchitis.

Another aspect of air pollution affects us indirectly. Acid rain precipitates on our lands, crops and waters, and acidifies them. Crops and forests are injured, fish life is not sustained.

Acid rain is created from sulfur oxide and nitrogen oxide pollutants. Oxidation and atmospheric moisture induce chemical actions yielding sulfuric and nitric acids. These are transported long distances (from the midwest) and short distances (intra- and inter-state). According to the EPA, Massachusetts is included in the "high sensitivity" region.⁴

DEFINITIONS AS APPLIED TO AIR QUALITY

The definitions included in this section were selected to provide an introductory understanding of air pollution technology. Refer to your **air pollution control district** regulations if you need a more complete dictionary of terms. When these words or phrases are used in official communications, notices, or orders, **these** definitions apply.

1. **Air contaminant** means any substance or man-made physical phenomenon in the ambient air space and includes, but is not limited to the following:
 - a. **dust** means finely divided solid matter;
 - b. **flyash** means the aerosolized solid component of burned or partially burned fuels. "Soot" and "cinders" are included within the meaning of the term flyash;
 - c. **fume** means any aerosol resulting from chemical reaction, distillation, or sublimation;
 - d. **gas** means the state of matter having neither independent shape nor independent volume but having a tendency to expand and diffuse infinitely;
 - e. **mist** means any liquid aerosol formed by the condensation of liquid vapor or by the atomization of liquids;
 - f. **odor** means that property of gaseous, liquid, or solid materials that elicits a physiologic response by the human sense of smell;
 - g. **smoke** means the visible aerosol formed by the condensation of liquid vapor or by the atomization of liquids;

- h. **vapor** means the gaseous state of certain substances that can exist in equilibrium with their solid or liquid states under standard conditions;
 - i. **pollen, microorganisms**;
 - j. **radiation** means any ionizing or non-ionizing electromagnetic or particulate radiation or any sonic, infrasonic, or ultrasonic wave;
 - k. **radioactive material** means any material or materials in combination (solid, liquid, or gaseous) which emit(s) ionizing radiation;
 - l. **heat, sound** mean any combination thereof, or any decay or reaction product thereof.
2. **Air Pollution** means the presence in the ambient air space of one or more air contaminants or combinations thereof in such concentrations and of such duration as to:
- a. cause a nuisance;
 - b. be injurious, or be, on the basis of current information, potentially injurious to human or animal life, to vegetation, or to property;
 - c. or unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business.
3. **Emission** means any discharge or release of an air contaminant to the ambient air space.
- a. **Open Burning** means burning under such conditions that the products of combustion are emitted directly to the ambient air space and are not conducted thereto through a stack, chimney, duct, or pipe. Open burning includes above or underground smoldering fires.
 - b. **Furnace** means any enclosed structure designed to produce heat from the burning of a fuel therein, but does not mean open hearths, incinerators, stoves for cooking, fireplaces, or equipment for the melting, reclaiming, or refining of metals or maple syrup.
 - c. **Fossil Fuel** means coal, coke, distillate oil, residual oil, or natural or manufactured gas.
 - d. **Incinerator** means any article, machine, equipment, contrivance, structure, or part of a structure used primarily for the reduction of combustible wastes by burning. Common types of incinerators are commercial or industrial, domestic, and municipal.
 - e. **Facility** means any installation or establishment and equipment associated therewith capable of emissions.
4. **Fuel** means any solid, liquid, or gaseous material such as, but not limited to, coal, gasoline, manufactured gas, natural gas, oil, or wood, used for the production of heat or power by burning.
- a. **Fossil Fuel** means coal, coke, distillate oil, residual oil, or natural or manufactured gas.
 - b. **Distillate Fuel Oil** means No. 1 or No. 2 fuel oil.
 - c. **Residual Fuel Oil** means No. 4, No. 5, or No. 6 fuel oil.
5. **Aerosol** means a system of solid or liquid particles dispersed in a gas.
6. **Air** means atmosphere.
7. **Ambient Air Space** means the unconfined space occupied by the atmosphere above the geographical area of the District.
8. **Chart** means the Ringlemann Scale for grading the density of smoke, as published by the United States Bureau of Mines and as referred to in the Bureau of Mines Information Circular No. 6888, or any smoke inspection guide approved by the Department.

See Appendix II(11) for 1976 Benchmark Air Quality Levels.

PART B: NOISE CONTROL

BOARD OF HEALTH RESPONSIBILITIES

1. Maintain records of noise complaints, documenting sources, areas affected, type of noise, and time-of-24-hour-day. Responsibilities will vary with current level of growth of each municipality. Some have no noisy industries and are remotely located from heavy traffic. Others may have a variety of industries, commercial areas, and highways that contribute to noise pollution.
2. Prevent added noise pollution by promoting an ordinance or by-law permitted by M.G.L. 40:21 (22). Such an ordinance can set noise standards required of new industries, commercial ventures, traffic. Suggested standards may be available through technical assistance from the Regional Office of the EPA.

RECOMMENDED BOARD OF HEALTH ACTIVITY

Boards of Health in municipalities that have been experiencing significant noise pollution may

1. Sponsor an article in town meeting proposing a survey of noise pollution and funding for equipment.
2. When town meeting approves, request assistance from the Regional Office of EPA and conduct the survey.
3. When survey is completed, prepare report and share information with selectmen, planning and zoning, conservation commission, police department.
4. If regulation is indicated in the report, sponsor ordinance or by-law permitted under M.G.L. 40:21 (22) or regulation under M.G.L. 111:31C.
5. Follow through on enforcement by utilizing services of sanitarian and police department.
6. Participate in long-range planning to include noise reduction in reconstruction and rehabilitation projects, in municipal and regional services.

RATIONALE

Noise pollution has been linked to a growing list of ailments including stress and high blood pressure, as well as to actual hearing loss.

The **Physician's Guide to Noise Pollution**⁵ states: "The limit between noises that cause hearing losses and those that do not appears to be somewhere between 80 and 90 decibels in any of the octave bands above 300 Hertz. Continuous exposure to noise in the speech frequency range of 500 to 2,000 Hertz is believed to have the following effects on hearing with exposure until age 50-59:

- 80 decibels — no permanent damage
- 85 decibels — damage risk minimal (not statistically significant)
- 90 decibels — damage is about 10%
- 95 decibels — damage is about 22%."

An important point is that damage to hearing from excessive noise is permanent; hearing loss cannot be restored with therapy. To avoid hearing loss, continuous exposure to excess noise must be prevented. The table on the following page provides a scale of loudness for sounds found in different environments. Of particular interest to the board of health is the listing of noise levels under the sub-heading Community (or Outdoor).

The **Physician's Guide** also presents available evidence of nonauditory effects of noise, as physiological effects, stress and annoyance, fatigue, and emotional disturbance.

Recent development of accurate, easy-to-operate, portable general-purpose sound level meters costing less than \$500 should remove one restraint to the development of municipal noise control programs. Until recently, the difficulty of measuring noise discouraged local action. Another reason for official restraint is the strange sounding technical rhetoric as, decibels (dB), Hertz (Hz), audible frequency range, "A" scale (dBA).*

Now, with meter in hand, a health official may take the first step to a viable program, by conducting a "noise level survey of residential areas and proposed abatement strategies." After a short course offered by the instrument manufacturer⁶ or EPA,⁷ a sanitarian or municipal employee of equivalent competence) can do the survey. Thus, the value of the program can be demonstrated at low cost and without employing additional personnel.

The survey⁸ will provide a breakdown of sources of noise — traffic, construction, aircraft, industry, disco, and other. A commonly used standard for residential areas during the noisiest hour of the day is L(10) noise level of 65 dBA. By local option this standard may be modified to 60 dBA or 70 dBA, or other levels.

M.G.L. 40:21 (22) authorizes towns to make ordinances, by-laws, or regulations for the control and abatement of noise in general, and specifically from motor vehicles. An ordinance or regulation permitted by this provision can order the board of health to survey and report the L(10) noise level at 65 dBA, and provide funding. Also townwide decision-making for this program has its merits.

M.G.L. 111:31C permits the board of health to make appropriate regulations when there is danger to the public health, or impairment to the public comfort and convenience. M.G.L. 111:143 regarding noisome trades is not a legal option for noise control. "Noisome" means foul, disgusting, harmful, odours. Historically, noisome is associated with "pestilential vapors" from plague, smallpox, yellow fever.

The board of health now has the basic tool (sound level meter), the program and person, and the law to abate and prevent noise pollution. Locate the noise problem areas; inform the community; work out long and short-term solutions with the planning board, zoning board, conservation commission, and police department.

DEFINITIONS

- Noise: Undesired or unwanted sound. Subjective, one person's desired (pleasant) sound may be another person's annoying sound. Noise is a public health problem when the noise level (loudness) frequency is harmful.
- Sound: The sound of music, the sound of thunder come to our ears as invisible waves varying in pressure and frequency.
- Decibel: (dB) The sound level or loudness. The dB scale is logarithmic. At 10 dB, the sound is just audible to most of us; at 20 dB, the sound is 10 X 10 (or 100) times louder than just audible.
- Hertz: (Hz) The frequency in wave cycles per second (C/S). Most of us hear sounds from 20 to 20,000 on the Hertz scale; sounds below our hearing range are infrasonic sounds above our hearing range ultrasonic. We are most sensitive (hear best) to the frequency range 300-400 Hz, which is the "A" of dBA of the noise level meter.
- dBA: The noise level in decibels as measured on the A-weighted scale of a noise level meter used in surveys of residential areas.
- L(10): The noise level which is exceeded 10 percent of the time during a one-hour survey.

* See Appendix for EPA summary, "Noise and its Measurement."

CHAPTER 11.

CHAPTER 11: Air Quality and Noise Control

Air Pollution Control
Noise Control

CHAPTER 12

OCCUPATIONAL SAFETY AND HEALTH

BOARD OF HEALTH RECOMMENDED ACTIVITY

The board of health should be aware of the problems that might arise in the various industries of its towns and be responsible to any complaints or requests for assistance that it receives. A common situation encountered by boards of health is receiving a complaint from a worker who says that something in his work environment is causing him to be ill, or that there is a safety hazard present at the jobsite. The board may wish to speak directly to the employer to try to verify and to correct the situation. If the employer refuses to correct the condition or denies that it creates a hazard or if the source of the problem cannot be uncovered, the board should contact either:

1. the Area Office of Occupational Safety and Health Administration (OSHA): 1200 Main Street, Suite 513, Springfield, Mass. 01103 (413) 781-2400 or 400-2 Totten Pond Road, Waltham, Mass. 02154 (617) 890-1238
2. the OSHA regional office headquarters, JFK Federal Building, Government Center, Boston, Mass. 02203 (617) 223-6710
3. the Massachusetts Division of Occupational Hygiene, 39 Boylston Street, Boston, Mass. 02116 (617) 727-3982
4. the Massachusetts Division of Industrial Safety of the Massachusetts Department of Labor and Industries, Saltonstall Building, 100 Cambridge Street, Boston, Mass. 02202 (617) 727-3460.

Any of these agencies may conduct an investigation of the workplace upon receipt of a complaint. Local fire departments have been notified of all facilities in the locality that have licensed radioactive materials on the premises, so that appropriate action may be taken in the event of fire or accident to protect workers and the public.

STATE RESPONSIBILITIES

In Massachusetts, the Department of Labor and Industries is the governmental body most concerned with occupational safety and health. Within the Department are the Division of Occupational Hygiene and the Division of Industrial Safety, each of which has its own specific responsibilities as well as shared responsibilities.

The Occupational Safety and Health Act specifies that when a state develops and enforces an occupational safety and health program which is at least as effective as the one developed by the Occupational Safety and Health Administration (OSHA), it may assume exclusive jurisdiction over health and safety conditions of employees within the state. The state must submit its plan to OSHA, and has three years after approval by OSHA to fully implement its plan. When the plan becomes operational during the three-year period, OSHA ceases its direct enforcement of federal standards and only monitors the state's enforcement of its own standards. After the three-year period and a subsequent one-year period, intensive federal monitoring ceases. As of May 1981, Massachusetts does not have its own plan, so OSHA is still an active enforcement agency here.

The **Mass. Division of Industrial Safety** has two major functions: the assurance of safety at the workplace and the issuance and enforcement of fair labor standards. The Division is concerned with ensuring that machinery is operating properly at the workplace and that the area is hazard-free. The Division investigates all serious and fatal accidents within the state and has the authority to bring criminal action against the employer. The Division also investigates complaints from employees, and through mediation is usually able to correct conditions without going to court. The Division also assists employees, trade unions, associations and employee groups in the development of comprehensive

training programs and in the formation of safety and health regulations. Finally, together with the Division of Occupational Hygiene, the Division of Industrial Safety conducts a consultation program in which, at the invitation of employers, they assess the presence and seriousness of workplace hazards.

The **Division of Occupational Hygiene** is concerned with assuring a healthy environment for the worker, one free of undue noise and stress, and toxic dust, chemicals, fumes, and smoke. It is equipped with a laboratory and a staff that includes industrial hygienists and chemists. The Division currently has four programs in operation. The first is an asbestos program in which inspectors investigate the workplace for evidence of asbestos dust, which is a major cause of cancer, and which is used in making products such as roofing, insulation, cement pipes, flooring, packing and gaskets, friction materials, coatings, plastics, textiles and pipes. The second program is one in which Division personnel investigate complaints about possible health hazards. These complaints may come from employees and employers, or they may be requests from physicians or lawyers of employees. The third program is the consultation program operated in cooperation with the Division of Industrial Safety. The last program, funded by the National Institute for Occupational Safety and Health (NIOSH), is run jointly with the Harvard School of Public Health, and provides on-the-job training in industrial hygiene to employees and employers, physicians, and industrial hygiene students.

FEDERAL RESPONSIBILITIES

The Occupational Safety and Health Act of 1970 was intended to reduce the incidence of personal injuries, illnesses, and deaths resulting from conditions of the workplace. The Act requires employers to comply with safety and health standards developed by OSHA, the Occupational Safety and Health Administration, which was established under the Act.

OSHA is a division of the Department of Labor. While centered in Washington, it has 10 regional offices including one in Boston. OSHA's responsibilities are to:

1. develop and promulgate safety and health standards
2. develop and promulgate regulations
3. conduct investigations and inspections to determine the status of compliance with safety and health standards and regulations
4. issue citations and impose penalties for noncompliance with standards and regulations.

The National Institute for Occupational Safety and Health (NIOSH) was also created by the OSH Act of 1970. It is within the Department of Health and Human Services under the jurisdiction of the Centers for Disease Control. NIOSH is the primary organization for health and safety research. Its responsibilities include the following:

1. establish occupational safety and health research programs
2. develop criteria, including criteria for toxic substances, to help OSHA set standards
3. issue employer record-keeping regulations to gather information regarding potentially toxic substances
4. establish medical programs to examine and test employees to determine the nature and incidence of occupational illnesses
5. issue rulings concerning the toxicity of any given workplace at the request of employers or employee representatives
6. publish lists of toxic materials and the concentrations at which toxicity occurs
7. publish industry-wide exposure studies outlining effect of exposure of the studied materials on employees.

The Occupational Safety and Health Review Commission (OSHRC) was also formed by the OSH Act of 1970. It adjudicates cases forwarded to it by OSHA when disagreements arise over the results of inspections performed by that agency.

RATIONALE

More than 14,500 workers are killed every year either at work or in connection with their jobs. Another 2,200,000 are disabled every year as a result of work-related accidents. This represents a loss of about 250 million person-days of work, which is considerably more than the amount of work time lost in strikes. "The effect of occupational illness and injury on the nation's economy is staggering. The amount of lost wages exceeds \$1.5 billion annually, and the loss in productivity exceeds \$8 billion."¹

The Public Health Service estimates that there are 396,000 cases of occupational diseases each year. The cost of occupational disease to the economy is also enormous. Asbestosis, a disabling disease of the lungs due to excessive exposure to asbestos, is a common disease in those working with asbestos in a wide variety of occupations. Other serious occupational diseases include: silicosis, lead intoxication, mercury poisoning, cancer, and noise-induced hearing loss. Miners, cotton textile employees, and people in the chemical, fungicide, and pesticide industries are highly susceptible to occupational disease.

If an occupational hazard also represents a public nuisance, the board of health may act under its authority to examine, destroy, remove and prevent nuisances (M.G.L. 111:122) and to regulate noisome trades (M.G.L. 111:143). In other cases, provisions of the Sanitary Code or the Environmental Code may apply.

Examples:

1. Sandblasting of leaded paint or asbestos-containing materials without proper vacuum or other equipment may constitute a serious threat to the health of the worker, and to the health of the inhabitants of the building, or even passers-by. The board of health should serve an order, in writing, on the person responsible, ordering abatement of the nuisance immediately or within a specified period, with whatever conditions it deems necessary, under authority of relevant provisions of the Sanitary Code and the General Laws (see Chapter 18 of this Guide for additional information on nuisances; Chapter 14 on housing; Chapter 13 on lead poisoning prevention and control).
2. Brake-lining replacement in automobile repair shops may create asbestos dust problems. Contact the Division of Occupational Hygiene (39 Boylston Street, Boston [617] 727-3982) to request enforcement of state regulations.

The board of health may also inform the Division of Occupational Hygiene of potentially hazardous conditions in the working environment needing further investigation. If malfunctioning equipment or unsafe practices are the major concern, contact the Division of Industrial Safety, Saltonstall Building, 100 Cambridge Street, Boston, Mass. 02202 (617) 727-3460.

CHAPTER 12.

CHAPTER 12: Occupational Safety & Health

CHAPTER 13

LEAD POISONING PREVENTION AND CONTROL

BOARD OF HEALTH RESPONSIBILITIES

(Authority under M.G.L. 111:190-199 and Mass. Regulations for Lead Poisoning Prevention and Control, 105 CMR 460.000)

1. **Inspect** residential dwellings and other buildings, which children utilize, for dangerous levels of lead, and require compliance with the Sanitary Code and Mass. Regulations for lead poisoning prevention and control 105 CMR 460.000 (M.G.L. 111:127A-K, 194, and 198).

Inspections must be made:

- a. upon notification from the Childhood Lead Poisoning Prevention Program (CLPPP) that a child living in a town dwelling unit has been found to have an elevated blood-lead level (top priority)
- b. in the course of an inspection of a dwelling unit for any other reason, or
- c. upon request by tenant or other person. (105 CMR 460.010).

Priorities for inspection:

Boards of health shall carry out inspections according to the following priorities until such time as all residential dwellings and child care facilities can be systematically inspected:

- i. Dwellings in which a child lives, who is found to have an increased body lead content, identified by a blood-lead concentration of greater than 39 micrograms per deciliters (mcg/dl). Such residential dwellings shall be inspected **within one day** of notification of the local board of health by the child's physician, hospital, clinic, or by the State Lead Poisoning Prevention Program. If the agency receives more than four such notices on any working day, the inspection may be performed one day later for each additional four notices received (105 CMR 460.012[1]).
- ii. All dwellings in the same building and in buildings adjacent to residential dwellings described under 12.1 in which a child under six years of age lives. Such residential dwellings shall be inspected within five working days after the inspection of units identified under 12.1 (105 CMR 460.023[2]).
- iii. All dwellings in which a child under six years of age resides or will reside which are being inspected for any other violations of the Sanitary Code. **Inspections for dangerous levels of lead shall be carried out at the same time as inspection for other reasons** (105 CMR 460.012[3]).
- iv. Dwellings in which a child under six years of age lives for which such an inspection is requested by a tenant or owner. These inspections shall be carried out within 10 days of receipt of request (105 CMR 460.012[4]).
- v. Dwellings about to be rented or sold to a family with a child under six years of age. These shall be inspected before final sale or lease (105 CMR 460.012[5]).
- vi. All dwellings in an area in which dangerous levels of lead have been found. These shall be inspected as expeditiously as possible (105 CMR 460.012[6]).
- vii. Boards of health shall inspect for dangerous levels of lead on all premises which are to be used as child care facilities upon request of the Office for Children, the operator of the facility, or a parent of a child who may attend said facility. These shall be inspected within 10 days of receipt of request (105 CMR 460.012[7]).

2. If inspection determines that a dwelling contains a dangerous level of lead (as defined in 105 CMR 460.004[05], the board of health must **treat the violation as an emergency matter** (M.G.L. 111:198).

The Board must:

- a. **post a notice** prominently at each entrance to the dwelling saying that the dwelling contains a dangerous level of lead which a child should not be allowed to eat or chew (105 CMR 460.015[1]).
- b. **report** the finding of a dangerous level of lead to the owner, affected tenants, and the Director of the CLPPP, by the end of the first working day following inspection (105 CMR 460.015[2]). See section below on Inspection and Enforcement.
- c. **reinspect** dwelling units found in violation of the code on the seventh working day after legal notice has been served. Record results on same type of inspection forms as used on previous inspection, and send copies to owner, tenant, and Director of CLPPP (105 CMR 460.016[1] and [2]).
- d. if violations still exist upon reinspection, the board of health shall initiate judicial proceedings, either criminal proceedings or civil action for injunctive relief, within one working day after the end of the original seven-day period (see below, section on Inspection and Enforcement). The board may make necessary repairs or contract for such repairs, and bill the landlord or seek court receivership of rents (M.G.L. 111: 127A, 127B; 105 CMR 460).

3. **Require**

- a. that appropriate methods be used for removal or covering of lead-containing paint or putty (described in the regulations).
 - b. that areas being corrected are completely cleaned at the end of each working day so that children may return to the area safely.
 - c. that each individual removing lead-based paint by any method always wears an approved respirator, to lessen the danger of contracting acute lead poisoning.
4. **Diligently prosecute** all judicial proceedings to enforce M.G.L. 111: 196 and 197 without substantial delay. According to M.G.L. 111: 198 and 105 CMR 460.011, violations of lead paint laws must be treated as emergency matters.
 5. **Send copies** of all inspection and reinspection reports to the Director of the State Childhood Lead Poisoning Prevention Program at the same time they are sent to other parties. In addition, the board shall submit a report to the Director, on a form provided by the Director, by the fifth of each month, signed by the head of the board. The report shall list the status of all uncorrected violations at the end of the previous month, all violations corrected during such month, what legal action has been taken regarding each uncorrected violation, and the procedural history and current status of such legal action.

RECOMMENDED BOARD OF HEALTH ACTIVITIES

1. Ensure that all children ages one to six are tested periodically for lead poisoning.
2. Contact the Childhood Lead Poisoning Prevention Program for assistance in holding seminars, training for health and code inspectors, and establishing screening programs.
3. Set up a schedule for systematic inspection of buildings in the community, according to the priorities listed in 1. c. above, and in the regulations (105 CMR 460.012).

STATE RESPONSIBILITIES (Mass. Department of Public Health, The Childhood Lead Poisoning Prevention Program, 305 South Street, Jamaica Plain, MA 02130, [617] 522-3700) or 1-800-532-9571.

1. Make lead poisoning a reportable disease (M.G.L. 111:191).
2. Institute an educational and publicity program (M.G.L. 111:192).
3. Establish a program for early diagnosis of lead poisoning (M.G.L. 111:193).
4. Establish a program to detect sources of lead poisoning (M.G.L. 111:194).
5. Establish a laboratory for lead and lead poisoning detection (M.G.L. 111:195).
6. Restrict the use of lead-based paint and glaze or other substance on toys, furniture, drinking or eating utensils, or interior or exterior surfaces or fixtures of any dwelling (M.G.L. 111:196).
7. Require that lead be removed from or covered in certain areas in dwellings where children under the age of six reside (M.G.L. 111:197).
8. Treat violations of M.G.L. 111:196-197 as Sanitary Code violations and as emergency matters (M.G.L. 111:198)

RATIONALE

Lead poisoning, which may permanently affect physical and mental development, is a serious problem in the U.S. among children ages one to six. Lead-based paint in old houses, in both urban and rural areas, is the most common source of lead ingested by children, although automobile exhaust fumes, processed food, ceramic containers and drinking water may also contribute to the problem.

Some children in the one to six age group have a tendency (called "pica") to eat non-food items like flaking paint. Even paint that is intact on a surface is dangerous because children often chew on window sills, doors, porch railings and other surfaces. A one square centimeter chip of paint one layer thick with 10 percent lead will contain five to 10 times the maximum daily safe intake for a child.

The tissues and organs most affected by lead poisoning are the bone marrow, kidney, and brain. Lead poisoning may result in death, but more often results in mental retardation and learning disability. Symptoms of lead poisoning may be vague, such as loss of appetite, irritability, fatigue, poor sleep, changes in behavior, and developmental regression; or they may be pronounced, such as clumsiness, weakness, ataxia, vomiting, constipation, abdominal pain, and disorientation.

Blood-lead level tests should be a routine laboratory procedure, twice a year for children ages one to three and annually for children ages three to six. Analysis is provided by the State Laboratory in Jamaica Plain.

A child found to have an elevated blood-lead level should be treated at once by a physician. The source of the lead poisoning should be removed, either by removing or covering the paint in the manner described below. No children should be present when the paint is removed because they may eat flakes, inhale the dust, or even lick dust off their fingers. Whoever is removing the paint should use a respirator. All dust and chips should be disposed of properly.

In addition to making required housing inspections, the board of health should establish a lead poisoning screening program in the community, or ensure community-wide screening by local physicians or a regional screening program. Screening for lead poisoning involves a simple blood test which can be performed by a nurse. For more information about screening programs, contact the regional office of the MDPH or the Childhood Lead Poisoning Prevention Program at 1-800-532-9571 or 617-522-3700.

PROTOCOL: INSPECTION AND ENFORCEMENT

PROCEDURES FOR INSPECTION

Inspectors shall observe the following procedures in any inspection to detect dangerous levels of lead, as specified in the regulations, 105 CMR 460.000:

1. Clearly identify the location of paint tested in the residential dwelling in accordance with the following instructions, using the form supplied by the Lead Poisoning Prevention Program (Reg. 13.1):
 - a. Fill out diagrammatic floor plan according to instructions. Indicate on plan: position of common hall, entry, each room, stairs and porch. (Use one block only except for interior hall; number bedrooms.)
 - b. Identify paint site tested by room and side (A, B, C, D, in reference to street side as indicated on diagram).
 - c. Identify paint location as one of the following: wall, ceiling, floor, window (including sash and mullions), window frame, window sill, door, door frame, closet door, closet interior, bannister rail, bannister spindle, porch rail, porch spindle, porch wall, porch ceiling, porch floor, stairs up, stairs down, cabinets, bottom moldings, top molding, dado, or chair molding.
 - d. Indicate whether paint is loose or whether paint is on an intact surface.
2. Test surfaces with loose paint at any height (Reg. 13.2).
3. Test intact paint on window sills; door frames below the four-foot level; windows, including mullions, below the four-foot level; stair rail spindles; stair treads from the lip to the riser on the bottom and four inches back from the lip on the top of the tread; doors below the four-foot level and four inches from all edges; stair rails; porch railings; and all other exterior and interior surfaces or fixtures that may be readily chewed by children (13.3).

These procedures for inspection apply to halls and stairways between apartments and exteriors of buildings as well as to interiors of individual apartments.

TESTING METHODS AND STANDARDS

The following tests are acceptable methods of determining whether paint contains a dangerous level of lead under Regulations 4.5 and 8.1. Boards of health must follow the procedures outlined in the regulations (105 CMR 460.000).

1. Testing with mobile x-ray fluorescence analyzer. Paint lead concentrations greater than 1.2 milligrams per square centimeter (mg/cm²) constitute a dangerous level of lead.
2. Testing with 6-8 percent sodium sulfide solution. Paint lead concentrations greater than 0.5 percent by dry weight constitute a dangerous level of lead (14.2).
3. Testing by atomic absorption spectrophotometry. Boards of health may utilize this method only with prior approval of the Director. The Director will supply detailed procedures on request (14.3).

NOTICE OF INSPECTION RESULTS

Boards of health shall follow the procedures below after an inspection has been made:

Posting of Notice

Immediately after completing an inspection which reveals dangerous amounts of lead, the board shall post prominently a notice that the dwelling contains a dangerous level of lead which a child should not be allowed to eat or chew, on each entrance to the dwelling. The notice shall not be removed until the premises have been found to comply with M.G.L. 111: 197 (15.1).

Report of Inspection

Whenever a dangerous level of lead is found in a residential dwelling the board shall report this to the owner, affected tenants, and to the Director of the Lead Poisoning Prevention Program. This report shall include a properly completed copy of the inspection form supplied by the State Program and shall be sent by the end of the first full working day following the inspection. A copy of the report shall also be sent to mortgagees and lienholders of record.

Notice to Owner

The board shall provide notice to the **owner of the building** containing a dangerous level of lead, on a form supplied or approved by the Director, including a statement that the dangerous level of lead violates M.G.L. 111: 197 and 199, is considered a violation of the State Sanitary Code, and may endanger or materially impair the health of occupants, especially children. The agency shall issue an order to correct the dangerous level of lead within seven days, and information on methods of correcting the dangerous level of lead, as set forth in Regulations 5.25.6 (see M.G.L. 111:127A).

Notice to the **tenant** of the dangerous level of lead shall be provided on a form supplied by the Director, which informs the tenant of his/her rights and remedies (M.G.L. 111:127B [15.4]).

REINSPECTION

Boards of health shall follow the reinspection procedures below:

Reinspection of all residential dwellings previously found to have dangerous levels of lead shall be carried out on the seventh working day after service of the legal notice and order to correct the violation of the Sanitary Code. Using one of the accepted methods of testing for lead in paint listed in Regulation 14, the code enforcement agency shall ascertain whether the old lead-based paint has been either completely removed or adequately covered. Newly-applied paint shall also be tested. Reinspections shall be performed in the same manner as original inspections pursuant to Regulation 13. (16.1)

Results of reinspection shall be recorded on the same type of form used for original inspections. Completed copies shall be sent to each party listed in 15.2 within one working day after the reinspection. (16.2)

The board of health shall not approve the covering or removal of paint or other materials containing dangerous levels of lead unless performed in compliance with Regulations 5.2-5.6. (16.3)

FURTHER ENFORCEMENT

Judicial Proceedings

if on reinspection at the end of seven days, a dangerous level of lead still exists, the agency shall initiate judicial proceedings which may be either criminal proceedings seeking enforcement of penalties provided under M.G.L. 111:196-199 and the Sanitary Code, Article I, Sec. 10.2; or a civil action for injunctive relief, brought under the authority of M.G.L. 111: 127A-C and M.G.L. 218: 19C, against the owner and any other person who may be joined under M.G.L. 111:127N before the end of the next working day.

Repair by Boards of Health (17.2)

If the dangerous level of lead is not corrected within seven days after reinspection, after obtaining a court order from the superior court in accordance with M.G.L. 111:127B, or from the appropriate district court in accordance to M.G.L. 218:19C, the board of health may under M.G.L. 111:127A and 127B either make the necessary repairs itself or contract with a private contractor to do so; the board may bill the landlord or seek court receivership of rents to reimburse itself in accordance with M.G.L. 111: 127C or 127H, unless the tenant has elected to utilize his/her own rights or repair under M.G.L. 111: 127L.

The board shall diligently prosecute all judicial proceedings to enforce M.G.L. 111:196-7 without substantial delay. The board shall oppose all requests for continuances in any judicial or administrative proceeding, or for the delay or relaxation of any deadlines made by the person responsible for correcting any violation.

For list of references, see References Appendix I (7).

CHAPTER 13.

CHAPTER 13: Lead Poisoning Control

Summary of Responsibilities

Rationale

Protocol I: Inspection

Protocol II: Repair, Condemnation and
Demolition of Dwellings, and Removal
of Occupants

Protocol III: Hearings

List of Violations Which May Endanger or
Materially Impair the Health or Safety and
Well-being of an Occupant

CHAPTER 14

HOUSING

BOARD OF HEALTH RESPONSIBILITIES

1. **Enforce state regulations** for all housing as set forth in the State Sanitary Code, Chapter II, "Minimum Standards for Human Habitation," 105 CMR 410.000, as required by M.G.L. 111:127A.

- a. Enforcement of the Minimum Standards for Human Habitation includes enforcement of certain sections (specified in the Sanitary Code) of other state codes as they apply to housing. (Note: Certain types of accommodations, including recreational camps or cabins, motels and mobile home parks, are defined and regulated under M.G.L. 140:32A-G.)

Massachusetts State Regulations for Lead Poisoning Prevention and Control (105 CMR 460.000)

Minimum Standards for Sewage Disposal Systems (State Environmental Code, Title 5, 310 CMR 15.00)

Massachusetts State Plumbing Code (248 CMR 2.00)

Massachusetts State Fuel Gas Code (248 CMR 4.00 – 8.00)

Massachusetts State Electrical Code (527 CMR 12.00)

Massachusetts State Building Code (780 CMR 1.00 – 22.00)

Copies of state regulations are available (at a small fee) from State Bookstore, State House, Room 116, Boston, MA 02133, (617) 727-2834.

- b. Enforcement of minimum standards for housing includes the following responsibilities:

- i. **Inspect**, when complaint is received or when requested to do so (105 CMR 410.820, M.G.L. 111:127A; M.G.L. 140:32C)*
 - houses
 - rental units
 - any other dwelling, dwelling unit or rooming unit
 - motels, overnight camps or cabins, and mobile home parks (which must also be inspected for licensing)
 - nursing homes, rest homes and other licensed facilities.
- ii. **Report all violations** found during an inspection to the occupant (410.822C) and inform the occupant (in summary) of the legal remedies available to him or her (410.821B). A **written** report of the inspection is to be made.
- iii. **Order (in writing) the owner or occupant to correct violations** within the time specified by the Sanitary Code, according to the seriousness of the hazard created by the violation (M.G.L. 111:127A; 105 CMR 410.830).
- iv. **Conduct necessary re-inspections** to determine compliance with previous orders, within the time limits specified in the Sanitary Code (105 CMR 410.830C).
- v. **Hold public hearings**, if requested to do so by person(s) upon whom orders have been served, by anyone aggrieved by a board of health or an inspector's actions, or by their failure to take action (105 CMR 410.850–410.860).
- vi. **Keep records** of all
 - inspection requests
 - inspection report forms
 - written orders to correct violations or to condemn a dwelling or unit

* If inspection by a specialist is required, e.g., a plumbing inspector, the specialist makes his/her report to the board of health, which in turn issues any necessary orders.

- variances granted, notices, orders or other records prepared in connection with hearings (these must be kept as public records at the board of health or in the office of the town clerk)
- final decisions and actions taken by the board in connection with enforcement of Chapter II of the Sanitary Code.

The Sanitary Code contains specifications for maintaining records on requests for inspection, and for inspection report forms (see section 410.820B and 410.821).

2. **Use powers specified** in the Sanitary Code, including emergency powers, if necessary, to protect life or health, to clean a dwelling unit, make necessary repairs, condemn or demolish a dwelling or portion thereof. Refer to the General Laws and Sanitary Code.

- a. The board may charge to the responsible party expenses incurred.

The board may use various legal means to obtain cooperation and compliance with the provisions of the Sanitary Code, including prosecution through the courts to impose fines upon violators or persons impeding legitimate board of health activity (M.G.L. 111:127 A-N).

- b. The board may also petition the Court to set up a rent receivership in order to ensure that necessary repairs can be made and paid for (M.G.L. 111:127H-J).

(See appendix for rent receivership petition.)

3. **Consider and act upon** any application for a license to operate a recreational camp, overnight camp or cabin, mobile home park or motel. A motel is defined by M.G.L. 140:32A as "any building or group of buildings which provide sleeping accommodations for transient motorists and which is not licensed as an inn" (under M.G.L. 140:2). Mobile home parks are defined and regulated by provisions of M.G.L. 140:32A-Q.

(For details on licensing and inspection of recreational camps and family-type campgrounds, see Chapter 16 of this Guide, below.)

- a. Requirements for licensing (M.G.L. 140:32B)

- i. Before granting, suspending or revoking a license, the board of health must hold a **public hearing**, reasonable notice of which shall have been published once in a local newspaper.
 - ii. Such licenses, unless previously suspended or revoked, shall expire on December 31 of the year of issue, but may be renewed annually upon application without a hearing.
 - iii. The fee for each original or renewal license is set at \$10.

- b. Notification Requirements

- i. The board of health must notify the Department of Environmental Quality Engineering of the granting or renewal of such a license, and DEQE shall have jurisdiction to inspect the premises to determine that the source of water supply and works for the disposition of sewage are sanitary. If DEQE finds water sources polluted or disposal works unsanitary, it must notify the board of health and the licensee to that effect by registered mail, and the board must forthwith prohibit the use of any polluted water supply (M.G.L. 140:32B).
 - ii. The board of health must immediately upon issuance send a copy of any original or renewed license for a mobile home park to the city or town clerk (M.G.L. 140:32F).

4. **Inspect from time to time** (at least annually) all camps and cabins, motels, mobile home camps licensed by the board of health. If unsanitary conditions (violations of the state Sanitary Code or local regulations) are found, the board may, after notice and a hearing, suspend or revoke the license (M.G.L. 140:32B).

5. **Enforce local regulations** regarding housing conditions.

RECOMMENDED BOARD OF HEALTH ACTIVITIES

1. Survey housing conditions in the municipality periodically, to identify hazardous conditions that may not have been reported and to determine the nature and extent of board action needed to maintain or improve housing conditions. Routine or systematic inspections, particularly of old housing units, may be in order, for example, to discover housing units containing lead paint hazards.
2. Provide public education and advice to homeowners, landlords, and occupants regarding minimal standards and methods for maintaining and repairing housing.

STATE RESPONSIBILITIES (MDPH)

1. Establish standards of fitness for human habitation that must be maintained by the occupants and owners of housing (M.G.L. 111:127A).
2. Provide technical assistance and advice upon request of boards of health. Regional offices of MDPH have sanitarians on their staff who can assist in performing inspections, instruct board of health members or staff in how to conduct inspections, and perform lead paint tests and other special services.
3. Act in any way a local board of health is authorized to act to effect compliance with Chapter I of the Sanitary Code (105 CMR 400.300). The Commissioner of MDPH or his designee may take such action if a local board of health has failed to enforce the provisions of the Sanitary Code after a reasonable time (refer to Ch. I of the Sanitary Code).
4. With respect to lead paint violations, under M.G.L. 111:198, the director of the lead poisoning prevention program has "concurrent responsibility and authority" to enforce M.G.L. 111:196 and 197, and has all powers and authority available to local boards of health pursuant to M.G.L. 111:127A-K.

RATIONALE

The State Sanitary Code, Chapter II, "Minimum Standards of Fitness for Human Habitation," provides detailed standards for safe and sanitary housing, "... to protect the health, safety and well-being of the occupants of housing and of the general public, to facilitate the use of legal remedies available to occupants of substandard housing, to assist boards of health in their enforcement of this code, and to provide a method of notifying interested persons of violations of conditions which require immediate attention."

Substandard conditions such as poor water supplies, insufficient heat, or pest infestation can contribute to or cause serious health problems, especially for the elderly, children, or other vulnerable residents. Defective electrical systems, inadequate exits, and structural defects may seriously endanger both residents of the unit and neighbors or visitors, since they may cause fires or accidents. Crowded conditions, improper sewage disposal, and shared use of toilet, water, sleeping quarters and gastrointestinal ailments or other communicable diseases, and may result in contamination of water supplies.

Such problems of substandard housing are often associated with poor nutritional status, low income, or limited education of residents, who are ill-prepared to deal with additional health hazards.

Boards of health should direct their efforts towards maintenance of the quality of housing to prevent development of health problems and public nuisances, and to protect the quality of life in their municipalities. Measures to prevent housing problems include: periodic inspections, which may uncover potential problems as well as actual violations of the Sanitary Code, and public education and advice to homeowners and landlords on how to maintain and repair their property.

If substandard housing exists, a board of health may require repairs, encourage rehabilitation, and condemn or order demolition of unfit housing, if necessary. The board may move beyond the level of responding to complaints by working with other town officials, businessmen, and

community groups to develop goals for rehabilitation and repair of housing in the community. The board of health and its staff are likely to know community conditions well enough to help set priorities and identify the most serious problem areas. The Sanitary Code itself defines a minimal list of "Conditions deemed to endanger or impair health or safety" (105 CMR 410.750). Inspectors must determine when they make an inspection if any other violations of the Code constitute conditions that may endanger or impair the health, safety, or well being of an occupant (105 CMR 410.700). If a town decides to seek local or other funding, from either tax revenues or private sources for a housing rehabilitation program, the board of health will probably have an important role in defining, documenting, and describing the problems and proposed solutions.

A program of routine or systematic inspections may alert landlords to the interest of the town in maintaining housing standards. If rental units or older homes likely to contain lead paint hazards are of special concern, a limited routine inspection program may be directed at these types of dwelling units. Inspecting a random sample of the target group of units may be a low-cost way to determine how widespread a problem is. In addition, a routine inspection program may be considered a screening device to check on those conditions that the Sanitary Code and local board of health identify as most important.

If inspection of a neighborhood uncovers numerous housing violations, there should be a search for general environmental problems before any effective effort can be made to correct the violations. The neighborhood may contain environmental stresses that adversely affect the residents. For example, excessive noise, glare, land covering, non-residential land uses, and traffic problems make the total neighborhood an unpleasant place in which to live, and may lead residents to let their houses deteriorate.

The first part of Chapter II, Sections 410.100 through 410.750, provides a set of standards that are designed to help determine whether a dwelling is fit to live in. Minimal standards are established for the following areas:

- kitchen facilities – 410.100
- bathroom facilities – 410.150 to 410.152
- potable water – 410.180
- hot water supplies – 410.190
- heating requirements – 410.200, 410.201
- lighting and electrical facilities – 410.250 to 410.258
- ventilation – 410.280, 410.281
- sewage disposal – 410.300
- installation and maintenance of facilities – 410.350 to 410.352
- space and use 410.400 to 410.402
- temporary housing – 410.430, 410.431
- exits 410.450, 410.451
- security – 410.480, 410.481
- maintenance of structural elements – 410.500 to 410.505
- insects and rodents – 410.550 to 410.553
- garbage and rubbish storage and disposal – 410.600, 410.602
- curtailment of service – 410.620

PROCEDURAL PROTOCOL I: INSPECTION

General Procedural Chart

Section I Pre-Inspection	Receive complaint Record complaint in book Set date and time for inspection within time limits of code
Section II Inspection	Notify occupant of rights to comprehensive inspection Perform minimal inspection as required Make a written report of the inspection
Section III Administration and Follow-up	Write orders to correct violations within time limits set by code Conduct necessary re-inspection Initiate court action if necessary (Consult with Town Attorney on how to do this)

Section I. Pre-Inspection

1. **Receive and record in a bound book with numbered pages** any complaint or request for inspection regarding possible violations of the housing code (Chap. II of the State Sanitary Code, 410.000; required by 410.820B). Record at least:
 - a. name, if given, of person requesting inspection
 - b. time and date of request
 - c. location of dwelling
 - d. nature of alleged violation
 - e. date the inspection is completed.
2. **Schedule an inspection**, regardless of whether or not the person requesting the inspection has notified the owner of the dwelling of the condition causing concern (410.820).

Prerequisite for inspections are that:

- a. The occupant or his representatives shall be present if he/she so desires.
- b. The inspection should be set at a time satisfactory to the occupant and the board of health. The date and time for inspection should be set within the time limits specified in Section 410.820:
 - within 24 hours when the alleged violation constitutes a condition which may endanger or materially impair the health or safety and well-being of an occupant (see list of such conditions below)
 - within five days for any other alleged violation.

Section II. Conduct and Reporting of Inspections

1. **Use a printed inspection report form** that meets all the requirements stated in Section 410.821 (see standard form prepared by MDPH, Appendix II(14), below). The inspection report form must be kept as a permanent record of the inspection. The form must include, but not be limited to:
 - a. specifically labeled spaces for:
 - name of the inspector
 - the date and time of the inspection or investigation
 - the location of the dwelling or dwelling unit inspected
 - the date and time of any scheduled follow-up inspection
 - a description of the conditions constituting violations

- a listing of the specific provisions of this Article or other applicable laws, ordinances, by-laws, rules or regulations that appear to be violated
 - a determination by the official inspecting the premises whether the violations are listed in 105 CMR 410.750 and whether the effect of any violation(s) not listed in 105 CMR 410.750 may endanger or materially impair the health and safety, and well-being of any person occupying the premises.
- b. a brief summary of the legal remedies available to the occupant of the affected premises, followed by this statement: "The information presented above is only a summary of the law. Before you decide to withhold your rent or take any other legal action, it is advisable that you consult an attorney. If you cannot afford to consult an attorney, you should contact the nearest Legal Services Office which is (name of Legal Services Office), (address), (telephone number)."
2. **Tell the occupant** at the start of the inspection that s/he is entitled to a comprehensive inspection (410.822).
3. **Inspect at least:**
- a. the condition alleged to be a violation of the Sanitary Code
 - b. all conditions listed in the Sanitary Code, Chapter II 105 CMR 410.750, as violations which may "endanger or materially impair the health or safety and well-being of an occupant" except as otherwise provided (410.822B).
4. **If requested, conduct a comprehensive inspection.**
5. **If a more specialized inspector is needed**, the board of health inspector should complete as much of the form as possible and promptly request the services of the specialized inspector. The regional office of MDPH, as well as local building, electrical, plumbing and fire inspectors, may be contacted for advice or assistance.
6. **Make a report to the occupant** of violations found, at the conclusion of the inspection, and indicate whether there is a need for an additional inspection by an expert.

Section III. Administration and Follow-up of Inspections

1. If the inspection reveals that a dwelling is not in compliance with the provisions of Chapter II, the board of health will **order the owner or occupant to correct any violations**. The schedule in Sec. 410.830 indicates how long after the inspection is made an order must be issued, and how soon the owner/occupant must comply with the order. See sample order form in appendix.
- a. All orders shall be in writing.
 - b. All orders should be served personally by a person authorized to serve civil process; by leaving a copy at the last known residence of the owner/occupant; or by registered mail. If his/her last residence is unknown or is outside the Commonwealth, a copy of the order should be posted in a conspicuous place on or about the dwelling.
 - c. All orders shall include (from Sec. 410.832):
 - a statement of the violations or defects found during inspection
 - a copy of all inspection reports
 - in the case of occupied dwelling units, a determination of whether any violations or the cumulative effect of more than one violation may endanger or materially impair the health, safety, or well-being of an occupant
 - notice of the right to a hearing
 - a time limit for compliance according to Sec. 410.830

- the following statement translated into any non-English language that is spoken as a primary language by greater than one percent of the population of the community: "This is an important legal document. It may affect your rights. You should have it translated."
 - in an order to an owner, advise the owner that the conditions which exist may permit the occupant of the dwelling to exercise one or more statutory remedies.
- d. Orders issued under Sec. 410.830 (in which the dwelling does not comply with the provisions of the Sanitary Code) are to be served on the "persons responsible for the violation." In most situations where a violation of the sanitary code is found, the order will be served upon the owner of the dwelling, rather than upon the occupant. If the owner feels that it is the occupant who is responsible, s/he may bring a civil action against the occupant in court. Situations in which the occupant is served the order usually involve either an occupant who has failed to maintain the dwelling in a sanitary manner, or an occupant who has installed hazardous equipment (e.g., appliances) in the dwelling.
 - e. Copies of an order issued under sec. 410.830 must be sent to all affected tenants; if there are more than three dwelling units affected in a common area, a copy of the order may instead be posted in a conspicuous place.
 - f. Orders issued under sec. 410.831 (conditions that render the premises unfit for human habitation) shall be served upon the owner **and** upon the affected occupants.
 - g. Copies of an order issued under sec. 410.831 must be sent to every mortgagee and lien holder of record.
2. **The board of health must reinspect** the dwelling to determine whether the order has been complied with. The reinspection may address only those conditions found to be in violation of the sanitary code in the original inspection. Reinspection must occur within 24 hours of the specified date of compliance when the violation(s) may endanger the health or safety, and well-being of the occupants (a list of such violations, from Sec. 410.750, is provided below), and within five days of the date set for compliance with an order issued on any other violations.

PROCEDURAL PROTOCOL II: REPAIR, CONDEMNATION AND DEMOLITION OF DWELLINGS, AND REMOVAL OF OCCUPANTS

Section I. **Expenses Incurred by the Board of Health in Repairing or Cleaning a Dwelling** (105 CMR 410.960)

1. If the board of health acts in an emergency situation to clean or repair a dwelling, the owner or person responsible for the property shall be charged all expenses incurred.
2. If the board of health orders a dwelling to be cleaned and/or repaired and the order is not complied with, the board of health may do the cleaning and/or repairing itself. The board may then charge the person(s) responsible for the dwelling with all expenses incurred.

Section II. **Condemnation Procedures** (105 CMR 410.831 and 410.950)

1. If an inspection reveals that a dwelling or dwelling unit is unfit for human habitation, the board of health must notify (in writing) the owner and each affected occupant that the board of health is considering ordering the dwelling condemned and vacated. Such notice must specify that owner or occupant may request a hearing (in writing) within seven days of the date of the notice.
2. If a written petition for a hearing is received, the board of health must inform the petitioner and other affected parties of the date, time and place of the hearing.

The hearing must be held at least five days after notice was given of the board's intent, and within five days of the date of request for a hearing (if the board has decided to uphold its intent).

3. After the hearing, or at least seven days after the notification of board intent, if no hearing has been requested, the board must issue a written report saying that the premises are unfit for human habitation. The board shall mark the dwelling "condemned" and order the building vacated, if occupied, and demolished, if necessary. Copies of any order must be sent to all affected parties, including holders of mortgages or liens.
4. In emergency situations: The board of health may issue an order of condemnation and order a building vacated without a hearing if it determines (in writing) that the danger to the life or health of the occupant is so immediate that no delay is permitted. In such a case the board must send written notice to each occupant, stating why the dwelling or dwelling unit is unfit for human habitation. (See sample notice in Appendix II[14].)
5. The dwelling that has been condemned as unfit for human habitation shall NOT be occupied again until written approval is granted by the board of health and the condemned placard is removed.
6. The board of health must remove the placard when the conditions causing condemnation have been corrected.

Section III. **Removing Occupants**

The board of health or local police may forcibly remove anyone who refuses to leave a dwelling that has been ordered condemned and vacated and has been placarded (105 CMR 410.950C). M.G.L. 79A:13 states that public agencies must provide relocation assistance and reasonably documented moving expenses if they displace a person or family by ordering that a dwelling be vacated, unless such payment is otherwise provided. The state may reimburse the municipality 50 percent of the expenses involved if relocation services and payments have been provided and reported.

Section IV. **Demolishing a dwelling**

1. The board of health may demolish any dwelling upon serving an order for demolition on the owner and all mortgagees of record (105 CMR 410.950D). See procedural list for demolition in Appendix II(14).
2. The owner is responsible for paying the cost of the demolition (see 105 CMR 410.950D for a full explanation of the owner's responsibility with regard to paying the costs of demolition.) It is advised that legal counsel be retained by the board of health or the town counsel or city corporation counsel in cases of demolition.

PROCEDURAL PROTOCOL III: HEARINGS

Section I. **Request for a Hearing Before the Board of Health** (105 CMR 410.850-860)

The purpose of a hearing is to sustain, modify, or withdraw an order, or to determine whether further action is necessary. It is the only legal remedy available to an alleged violator of the Sanitary Code after s/he has been issued an order.

1. A request for a hearing must be made in the form of a written petition within seven days after the order was served.
2. Anyone who has received an order may petition for a hearing.
Exception: Under 105 CMR 410.831, which concerns the condemnation, vacating, and demolition of a dwelling, opportunity for a hearing is given **before** the order has been issued. After all of the requirements of 105 CMR 410.831 B are met, no further opportunity for a hearing is allowed.
3. Anyone aggrieved by the **failure** of the board of health to do any of the following may petition for a hearing:
 - a. inspect a premises upon request
 - b. issue a report on an inspection
 - c. find violations where they are claimed to exist or certify that a violation or combination of violations may endanger or materially impair the health or safety, and well-being of the occupants of the premises
 - d. issue an order as required by 105 CMR 410.830.
4. Upon receiving a petition for a hearing, the board of health must:
 - a. inform the petitioner and other affected parties (at least the owner and occupants) of the date, time and place of the hearing
 - b. inform the petitioner and other affected parties of their right to inspect and copy the board's file concerning the matter to be heard.

Section II. **Time Limits for Hearings** (105 CMR 410.852)

Hearings must take place no later than 30 days after the order was served, and generally within a shorter period as specified below:

1. The hearing will take place no later than **seven days** after an order was served for the correction of violations listed under 105 CMR 410.830A and B, and the petitioner refuses to correct these conditions specified in the order pending the outcome of the hearing.
2. The hearing will take place no later than **14 days** after a request for a hearing was made in which it is alleged that board of health personnel have failed to inspect premises upon request, failed to issue an inspection report, failed to find violations where violations are claimed to exist, and failed to issue an order as required by 105 CMR 410.830.
3. The hearing will take place no later than **14 days** after a request for a hearing was made when a dwelling was found to be unfit for human habitation and ordered to be condemned, vacated, and demolished if necessary (105 CMR 410.831).

Failure to hold a hearing within the specified time period does not affect the validity of the order.

Section III. **Procedures for the hearing** (105 CMR 410.853)

At the hearing, the petitioner and any other affected parties will be given a chance to be heard, to present witnesses or evidence, and to show why an order should be changed or withdrawn; why a dwelling should not be condemned, vacated or demolished; or why an action or failure to act by an inspector or other personnel of the board of health should be reconsidered, rescinded, or ordered.

Section IV. **Board of Health Action on the Petition for a Hearing**

The board of health must inform the petitioner in writing of its decision within **seven days** after the conclusion of the hearing.

1. The board of health must sustain, modify, or withdraw the order. If the order is sustained or modified, it must be carried out within the time period allotted in the original order or in the modification.
2. Every notice, order, or other record prepared by the board of health in connection with the hearing must be entered as a matter of public record in the town clerk's office or in the board of health office.

Section V. **Legal Options for Board of Health or Persons Aggrieved**

1. **Right to Appeal Final Decisions**

Any person aggrieved by the final decision of the board of health with respect to any order issued under the provisions of Chapter II may seek relief in any court of competent jurisdiction (105 CMR 410.860).

2. **Penalties** (105 CMR 410.900 to 410.950)

The board of health may bring suit in court to seek penalties against violators or people impeding legitimate inspections:

- a. Anyone who tries to prevent or in any way interfere with an inspection after a search warrant has been obtained and presented shall, upon conviction be fined not less than \$10 nor more than \$500.
- b. Anyone who fails to comply with an order shall, upon conviction, be fined not less than \$10 nor more than \$500. Each day's failure to comply is a separate violation.
- c. Anyone violating any provision of the sanitary code for which no penalty is specified shall be fined upon conviction not less than \$10 nor more than \$500.

3. **Granting Variances** (105 CMR 410.840)

If the board of health feels that enforcement of the code would do manifest injustice, it may grant a variance (except in the case of violations of conditions in Sec. 410.750, "Conditions Deemed to Endanger or Impair Health or Safety," listed below) PROVIDED THAT:

- a. The variance is granted after all affected occupants have been notified and given the opportunity to request a hearing.
- b. The variance is reported in writing and filed by the owner in the registry of deeds for the county in which the dwelling is located.
- c. A copy of the variance is made available to the public in the office of the town clerk or the board of health.
- d. Notice of the grant of variance is filed with the Commissioner of Public Health of the Commonwealth

4. **Revoking, Modifying, or Suspending a Variance**

This may occur only after the owners and affected occupants have been notified in writing and given an opportunity for a hearing.

LIST OF VIOLATIONS WHICH MAY ENDANGER OR MATERIALLY IMPAIR THE HEALTH OR SAFETY AND WELL-BEING OF AN OCCUPANT (105 CMR 410.750)

The following violations are always considered to have the potential to endanger or materially impair the health or safety and well-being of the dwelling's occupants or the public. Any violation of 105 CMR 410.100 through 410.499 **may** fall into this category in some cases, but they are not listed here because they are not **always** in this category. Regulation 410.750N states that if any violation other than those listed below is not corrected within the time specified by the board of health, the violation will fall into this category.

1. Failure to provide a supply of water sufficient in quantity, pressure, and temperature, both hot and cold, to meet the ordinary needs of the occupant for a period of 24 hours or longer (105 CMR 410.180 and 410.190).
2. Failure to provide heat as required by 105 CMR 410.210; improper venting or use of a space heater or water heater as prohibited by 105 CMR 410.200(B) and 410.202.
3. Shutoff and/or failure to restore electricity or gas.
4. Failure to supply the electrical facilities required by 105 CMR 410.250(B), 410.251(A), 410.253(A), 410.253(B) and the lighting in common area required by 105 CMR 410.254.
5. Failure to provide a safe supply of water.
6. Failure to provide a toilet and maintain a sewage disposal system in operable condition as required by 105 CMR 410.150(A)(1) and 410.300.
7. Failure to provide adequate exits; the obstruction of any exit, passageway or common area caused by any object, including garbage or trash, which prevents egress in case of emergency (105 CMR 410.450 and 410.451).
8. Failure to comply with the security requirements of 105 CMR 410.480 (D).
9. Failure to comply with any provisions of 105 CMR 410.600 through 410.602 which results in any accumulation of garbage, rubbish, filth or other causes of sickness which may provide a food source or harborage for rodents, insects or other pests or otherwise contribute to accidents or to the creation or spread of disease.
10. The presence of lead-based paint on a dwelling or dwelling unit in violation of the Massachusetts Department of Public Health Regulations for Lead Poisoning Prevention and Control, 105 CMR 460.000 (see Chapter 111, Sections 190-199 M.G.L.).
11. Roof, foundation, or other structural defects that may expose the occupant or anyone else to fire, burns, shock, accident or other dangers or impairment to health or safety.
12. Failure to install electrical, plumbing, heating and gasburning facilities in accordance with accepted plumbing, heating, gas-fitting and electrical wiring standards or failure to maintain such facilities as are required by 105 CMR 410.351 and 410.352 so as to expose the occupant or anyone else to fire, burns, shock, accident or other danger or impairment to health or safety.
13. Any of the following conditions which remain uncorrected for a period of five or more days following the notice to or knowledge of the owner of said condition or conditions:
 - a. lack of a kitchen sink of sufficient size and capacity for washing dishes and kitchen utensils or lack of a stove and oven or any defect that renders either inoperable
 - b. failure to provide a washbasin and a shower or bathtub as required in 105 CMR 410.150(A)(2) and 401.150(A)(3) and any defect which render them inoperable
 - c. any defect in the electrical, plumbing, or heating system which makes such system or any part thereof in violation of generally accepted plumbing, heating, gasfitting, or electrical wiring standards that do not create an immediate hazard
 - d. failure to maintain a safe handrail or protective railing for every stairway, porch balcony, roof or similar place as required by 105 CMR 410.503(A) and 410.503(B)
 - e. failure to eliminate rodents, cockroaches, insect infestations and other pests as required by 105 CMR 410.550.

CHAPTER 14.

CHAPTER 14. Housing

Summary of Responsibilities

Rationale

Protocol I: Inspection

Protocol II. Repair, Condemnation and
Demolition of Dwellings, and
Removal of Occupants

Protocol III: Hearings

List of Violations Which May Endanger or
Materially Impair the Health or Safety
and Well-being of an Occupant

CHAPTER 15

FOOD PURITY AND QUALITY

BOARD OF HEALTH RESPONSIBILITIES

1. **Consider and act upon any applications for license** or permit to operate a food-related business or establishment, including the following:
 - a. Food service establishment: any fixed or mobile place, structure or vehicle whether permanent, transient, or temporary, including any restaurant, coffee shop, cafeteria, luncheonette, short-order cafe, grille, tearoom, sandwich shop, soda fountain, tavern, bar, cocktail lounge, night club, roadside stand, industrial feeding establishment; private, public, or non-profit organization or institution routinely serving the public; catering kitchen, commissary, or any other similar eating and drinking establishment or place in which food or drink is prepared for sale or for service on the premises or elsewhere, or where food is served or provided for the public with or without charge. Regulations: State Sanitary Code, Article X, 105 CMR 595.
 - b. Retail food establishment, such as grocery store, supermarket, milk store, "convenience store," delicatessen, butcher shop, ice cream stand, or any other shop, store, stand or vehicle for the retail sale of food.
 - i. Detailed plans must be approved by the board of health and the State Division of Food and Drugs before a permit to operate can be granted.
 - ii. The board of health **must** send a copy of the certificate of registration, upon issuing such registration, to the Director of Food and Drugs of MDPH.Regulations: "Rules and Regulations Relative to Retail Food Establishments," 105 CMR 590 promulgated under the authority of M.G.L. 94:305A.
 - c. Plants which break and can eggs. Regulated under M.G.L. 94:89 and 105 CMR 555.
 - d. Establishments for pasteurization of milk.
 - e. Establishments for the retail sale of milk (in cities and in towns which have appointed a milk inspector). Regulated under M.G.L. 94:40.
 - f. Bottling plants for non-alcoholic beverages (i.e., carbonated soft drinks, soda water, mineral and spring water). Regulated under M.G.L. 94:10A-10G and 105 CMR 570.
 - g. Bakeries. Regulated under M.G.L. 94:9G-M and 105 CMR 550 and 551.
 - h. Plants which manufacture frozen desserts and frozen dessert mix. (Application for permits are to be made in February, and the license year is March 1 until the end of February). Regulated under M.G.L. 94:65H-65U and 105 CMR 560, 561 and 562.

2. **Inspect** the above-mentioned food-related businesses and establishments and cold storage warehouses (M.G.L. 94:67) to determine and enforce compliance with the General Laws and state and local rules and regulations.
 - a. Inspection must be made whenever the board receives an application for a permit or license, and as the board of health considers it necessary. In addition, Article X of the Sanitary Code (105 CMR 595) requires that **food service establishments be inspected at least every six months**.
 - b. Whenever the board of health makes an inspection, it must record its findings in writing on **prescribed forms** for retail food establishments and food service establishments. The **original** of such inspection report form for a retail food establishment must be furnished to the registrant or operator; a copy of the inspection report form must be given to the licensee or operator of retail food establishments and other food-related businesses.
 - c. When violations are found, the board may use emergency powers as necessary (see Chapter I of the Sanitary Code, 105 CMR 400.200) or issue an order for corrections (see applicable rules and regulations for details regarding orders, hearings, conditions for suspension or revocation of permits, etc.).
3. **Review plans for new establishments** or those to be remodelled extensively. Applicants should be familiar with the appropriate laws and regulations.
 - a. For food service establishments, the board of health should act within 30 days after the plans are submitted for review. Otherwise, approval of the plans is automatic (105 CMR 595.37[B]).
 - b. The board reviews plans for new bakeries to determine their compliance with Sections 2-6 and 9F-9J of M.G.L. Chapter 94, and with rules and regulations adopted under Sections 9D and 9F of Chapter 94 (M.G.L. 94:9M).
 - c. Bottling plants must file sketches or plans with their initial application, or when changes have been made in the plant and license renewal is sought.
 - d. For retail food establishments, detailed plans must be approved by the board of health and the State Division of Food and Drugs and before a certificate of registration can be issued.
4. **Report suspected outbreaks of food poisoning** immediately to the MDPH, Division of Food and Drugs (M.G.L. 111:112), **and investigate local outbreaks of food poisoning** to determine probable cause so that remedial action can be taken if necessary (see Protocol I below).
5. **Make and enforce reasonable regulations** of "conditions under which all articles of food may be kept or exposed for sale, in order to prevent contamination thereof and injury to the public health" (see M.G.L. 94:146 for procedural details).

Public hearings must be held for rules and regulations made under this section. Notice of these hearings must be publicized for two successive weeks, starting at least 14 days prior to date of hearing. **All rules and regulations made by a local board of health under this section must be submitted to and approved by MDPH** before they become effective. Under Chapter 94, a board of health may also make regulations regarding the handling and sale of the following food items:

- bakeries (M.G.L. 94:9D)
 - non-alcoholic beverages (M.G.L. 94:10E)
 - milk (M.G.L. 94:16J)
 - breaking and canning eggs (M.G.L. 94:89).
6. **Investigate and take appropriate action**, including notification of the Director of the Division of Food and Drugs, if the board of health has reasonable cause to suspect the possibility of disease transmission from any food service establishment employee.

7. The board of health may inspect food offered or exposed for sale, or kept with the intent of being sold, in the town or city of the board's jurisdiction.

The board or its agent may enter any place where food is stored, kept, or exposed for sale. (M.G.L. 94:146 ; refer also to Article I of the Sanitary Code, 105 CMR 400.100). Food subject to such inspection includes:

- carcasses of all slaughtered animals and all meat
 - fish
 - vegetables and produce
 - fruit
 - provisions of any kind.
8. If on inspection, any foods are tainted, diseased, corrupted, decayed, unwholesome or unfit for use as food from any cause, the board of health shall seize and cause such food to be destroyed or disposed of. Items disposed of **cannot be used for food** (M.G.L. 94:146, and Reg. 35.1, Article X (105 CMR 595).
 9. The board of health may take samples of milk or other food for bacterial counts (M.G.L. 94:30), and collect samples of food for enforcement of M.G.L. 186-195 regarding "adulteration and misbranding." Careful procedures should be used.
 10. Enforce Section 81 of the General Laws, Chapter 130 (which is also enforceable by MDPH and the Director of Marine Fisheries), which says that no one may transport shellfish into Massachusetts or sell shellfish from outside Massachusetts without certification from the U.S. or foreign regulatory authority for interstate shellfish shipping.

The board of health should cooperate with the State Shellfish Sanitation Program (see Section on shellfish, below).

OTHER LOCAL RESPONSIBILITIES

The alderman or city council of a city, or board of selectmen of a town, regulate and license the taking of shellfish from coastal water (see section on shellfish below).

STATE AND FEDERAL RESPONSIBILITIES

MDPH, Division of Food and Drugs; U.S. Dept. of Agriculture; Shellfish Sanitation branch of PHS, DEQE's Shellfish Sanitation Program; Division of Marine Fisheries of the Dept. of Fisheries, Wildlife, and Recreational Vehicles

1. The state or federal government inspects and/or grants licenses to facilities involved in manufacturing and processing foods and enforces regulations for:
 - a. cold storage and frozen foods (M.G.L. 94:66-73A)
 - b. fish and shellfish processing (M.G.L. 94:84-88C)
 - c. milk transportation (M.G.L. 94:16J, 16K)
 - d. eggs (M.G.L. 94:89-92)
 - e. custom slaughterhouses, non-commercial (M.G.L. 94:118-139G)
 - f. meat and poultry slaughterhouses and processing (Dept. of Agriculture, federal jurisdiction, and 105 CMR 530, 531, 532, 533, 534; M.G.L. 94:118-139G)
 - g. vending machines (M.G.L. 94:308-313).
2. The State DEQE regulates the local shellfish industry and is reviewed annually by the Federal Shellfish Sanitation Branch of the Public Health Service (see section on shellfish below).

RATIONALE

Why conduct food inspections?

The regulation of establishments that prepare, sell, or serve food is a public health measure designed to prevent food poisoning, control the spread of infectious diseases, and protect the nutritional value of food. Food provides an ideal germ-nurturing environment. For this reason, food and milk sanitation has historically been of great importance in controlling such diseases as cholera, tuberculosis, infectious hepatitis, typhoid, and dysentery. Today, food poisoning is the most frequent cause of gastrointestinal infections in the United States. The painful consequences of food poisoning, such as nausea, vomiting, cramps, or diarrhea, are responsible for much temporary disability and lost work hours. Certain types of food poisoning can be fatal.

Preventing food poisoning

An estimated two to ten million people in the United States contract some form of food-borne disease annually. This places food poisoning second only to the common cold as the most frequent cause of illness. Although chemical additives and nutritional deterioration are important public health issues, the most pressing food-related problem for local boards of health is microbiological contamination.

Methods for preventing food poisoning include careful control of processing, storage, preparation, and serving of food; disposal of waste food materials, and personal cleanliness of food handlers. Meats, meat products, custards, pastries, and creamy salad dressings (containing egg and milk) are particularly susceptible to contamination and need to be closely monitored. Bacteria thrive on mid-range temperatures, so proper refrigeration or heating is essential during **all** phases of handling perishable foods — processing, storage, preparation, and serving.

Proper sanitation is intended to control the spread of **bacteria**, such as staphylococci, Clostridium perfringens, and salmonella. This why regulations stress the cleanability of surfaces as well as general cleanliness and proper toilet facilities.

Prevention of disease transmission

The key to controlling the spread of infectious diseases is the **food handler**. Regulations pertaining to proper hand-washing and personal hygiene are particularly important. Insects and rodents, notorious carriers of infectious diseases, must be eliminated from food handling and storage areas. Temperature control is a third component in disease prevention. Non spore-forming pathogenic bacteria are destroyed by temperatures of 170°F (77°C) or higher. This is why, for example, the temperature of dishwashing machines is so closely regulated.

Administrative action

An effective board of health seeks to prevent food sanitation problems before they develop. Regular inspections are opportunities to discuss proper food handling techniques with management and owners. Mobile food vendors and applicants for temporary permits, who may not be very well acquainted with the principles of proper food sanitation, may be given simple written instructions to guide them. A positive cooperative relationship with food handlers is recommended. Their willingness to adopt sanitary foodhandling practices on a day-to-day basis is the best guarantee of food purity and quality. Often, an informal suggestion is as effective as a formal order in the correction of food-related problems.

Fees

Many boards of health establish fees (through the process of passing local regulations) for licenses or catering registration in order to offset the expenses of inspections and administration. Certain fees are set by state law. For example, the fee that must accompany applications for a bottling plant permit is \$20, and half must be sent to MDPH with a copy of the license, application, sketch or plans and other documents. Consult the applicable laws or regulations, or request information from MDPH regional or central office for specific information.

PROTOCOL I

INVESTIGATING A FOOD POISONING OUTBREAK

Food-poisoning outbreaks are usually recognized by the sudden occurrence of a group of illnesses within a short period of time among individuals who have consumed one or more foods in common. Symptoms include severe nausea, cramps, vomiting, diarrhea, or fever. The time lapse between ingestion and onset of symptoms varies according to the organism involved:

Organism	Biologic Action	Incubation
Staphylococcus	Intoxication: poisoning is from bacterial toxins that are usually present in food at the time of ingestion	1–6 hours
Clostridium perfringens	Intoxication	8–22 hours; usually 10–12 hours
Salmonella	Infection (organism multiplies rapidly, directly causes symptoms)	6–48 hours

If a food poisoning outbreak is suspected, prompt investigation is the key. MDPH must be immediately notified.* If a widespread outbreak is suspected, MDPH will send an epidemiologist to investigate. In the meantime, or in a local outbreak, the following steps should be taken:

1. Find out what food items were served to those who became ill.
 - be especially alert to foods capable of supporting rapid growth of infectious or toxigenic bacteria, e.g., meats, poultry and fish; custards, milk and egg concoctions, creamy salad dressings.
 - record the temperatures of any potentially hazardous foods within unsafe temperature zone of 50°–150°F. A clean meat thermometer can be used.
2. Embargo (confiscate) all leftover foods and gravies and any supplemental batches. If feasible, use a common storage refrigerator to hold foods until they can be systematically sampled.
3. Collect initial samples (approximately 1 lb.) in 1/2 pint paper food cartons. Sterile equipment must be used for collecting and at least two samples of each food should be collected, one of which **must** be provided to the owner of the food service establishment or other responsible person.
4. All persons who were involved in preparing each food should be interviewed. Each step in the foods' preparation should be investigated in sequence. This sequence includes:
 - receiving and storage
 - pre-cooking procedures
 - cooking time and temperature, or other preparation time
 - preparation for serving, including storage after preparation
 - temperature of food during serving
 - length of serving period.
5. Note condition of workers. Are there any disease symptoms or lapses in personal hygiene (e.g., boils, infected cuts, common cold symptoms)?
6. Note sanitary quality of equipment. Does cooked food cross pathways with raw food? (Cooked food can often become contaminated if it comes into contact with utensils or equipment which has previously come into contact with contaminated raw food.

* Division of Communicable Disease: (617) 727-2686.
Division of Food and Drugs: (617) 522-3700 x356.

7. Finally, question people affected by the food by finding out the most common food item ingested. A "Case History Questionnaire" (see Appendix II[15]), can aid in this information gathering. If the spaces under FOOD ITEM are filled with the names of food served, this form becomes a checklist and memory prompter.

Salmonellosis is a particular type of food poisoning. Technically, it is an acute infectious disease. The salmonella organism thrives in a wide variety of hosts, including all animals used for food, pets, turtles, rats, flies, and cockroaches. It frequently thrives in man, causing him to be a carrier. Thus, a food worker may become a dangerous reservoir while exhibiting only mild symptoms or none at all.

Because of the relatively long and variable incubation period (6–48 hours), food contaminated with salmonella may not be available when the disease appears. However, reservoirs or sources of food contamination can still be traced. For example, cultures of blood samples from food poisoning cases can be matched to cultures collected from food workers, unsanitary equipment, raw meat, vermin feces, etc.

Special attention should be paid to food service operations which distribute food from a central location to several sites. For example, lunch trucks and food caterers need to maintain temperature control (below 45° F or above 140° F) during the distribution process. Regular inspection and good communications with food handlers are preventive measures that the board of health undertakes to reduce food poisoning incidences.

PROTOCOL II

INSPECTION OF RESTAURANTS AND OTHER FOOD SERVICE ESTABLISHMENTS

(See State Sanitary Code, Article X, 105 CMR 595.)

General Information Regarding Permits and Inspections for Restaurants and Other Food Service Establishments (Article X, 105 CMR 595).

Any person who wants to open a restaurant must make a written application for a permit. The permit is valid for **one year** only, and then must be renewed.

Permits for temporary food service establishments shall be issued for a period not to exceed 14 days. The dates must be indicated on the permit. **Catering** establishments must register with the board of health in the town where a meal is to be served. Whenever possible, this registration should occur seven days before the date of the occasion (Article X, 105 CMR 595.21).

Step 1. Pre-inspection: Food service establishment applies for permission to operate.

Operator should submit an **Application for Permit** form, which includes:

- a. applicant's full name and post office address. Names and addresses of partners or corporation officers should be included.
- b. location and type of food service establishment, detailed plans
- c. signature of applicant(s).

Step 2. Inspection: Food service establishment is inspected for purposes of granting a new permit, renewing an old one, or for routine check for compliance with the Sanitary Code, required at least every six months, (Article X, 105 CMR 595.032 and 595.033).

Use the report form entitled "Inspection Report, Food Service Establishments" based on the regulations set forth in Article X of the State Sanitary Code. All findings should be recorded on this form (see appendix). A copy of the report should be given to the permit holder or applicant. Unless the board of health member or its agent is well acquainted with the technical aspects of performing a restaurant inspection, it is recommended that s/he enlist the assistance of personnel from the MDPH Division of Food and Drugs, until better acquainted with inspection procedures. In general, the physical structure should be clean and the food free from contamination. Basic criteria include:

Cleanliness:	Are the floors, walls and ceilings clean?
Equipment:	Are the refrigerator, dishwasher, microwave ovens, utensils and toilet facilities in good operating order?
Water supply:	Is it safe and adequate? At proper temperature?
Storage:	Are food items and toxic materials kept separate? Properly labeled?
Source and wholesomeness of food:	Is the food coming from an inspected source? Is it free from visible contamination?
Rodents and insects:	Is there any evidence of rats, mice, roaches or flies?
Employee health:	Are food handlers and other employees ostensibly free of communicable diseases, and is personal hygiene satisfactory?

These criteria are intended to give the board of health member only general procedures for conducting a restaurant inspection. An inspection should not be attempted by a non-professional without expert guidance.

Step 3. Action and follow-up:

- a. **If food service establishment is in compliance with regulations** (105 CMR 595.032), a permit is issued to the establishment (either new or renewal). Copies must be sent to the MDPH Division of Food and Drugs and to the applicant. An additional copy is placed on file with the board. (See Appendix II[15] for sample copy of permit.)
- b. **If food service establishment is not in compliance with regulations**
 - i. Violations are noted on the inspection form. Operator/permit holder is notified and ordered in writing to comply with the violated provisions (see sample order form in appendix). This order should be delivered personally or by certified mail (105 CMR 595.033).
 - (a) Include a statement of the violation. In addition, the order may suggest steps to take to remedy the situation.
 - (b) Allow a reasonable time for any action it requires.
 - (c) Inform the operator of her/his right to a hearing, of her/his responsibility to request a hearing, and to whom and by what date the request should be made.
 - (d) State that failure to comply with any order issued in accordance with regulations may result in immediate suspension of the permit.
 - ii. All unfit or unwholesome food is condemned or destroyed.

If there is any question or dispute concerning the condition of food, it should be embargoed, confiscated, but kept at the site, labeled or otherwise identified (105 CMR 595.035) and a sample sent to the State Laboratories. It must not be used for food.
 - iii. A permit may be **suspended** "for cause" pending a hearing or revocation (105 CMR 595.032).
 - (a) **If upon re-inspection, the food service establishment is in compliance**, the permit should be renewed (see step 2A above).
 - (b) **If operator requests a hearing**, (105 CMR 595.034) the request should be filed within **seven** days of the day the order was served. This request must be made **in writing**.

Upon receipt of request, the board of health determines a time and place for the hearing and informs the petitioner thereof in **writing**. The hearing should be held within **10 days** of the filing of the petition. This time limit may be postponed if the petitioner submits a good and sufficient reason for the postponement. At the hearing, the petitioner must be given the opportunity to show why the order should be modified or withdrawn. All written transactions connected with the hearing are a matter of public record and must be available at the board of health office.

After the hearing, the board of health shall sustain, modify, or withdraw the order. It may also suspend or revoke the permit, in which case the petitioner must be informed in writing.

If the permit is then revoked, the decision may be appealed to MDPH.

If the board of health withdraws the order, the permit is renewed (see 2A above).

If the order is sustained or modified, the actions required of the petitioner must be carried out within the time period specified in the original order or in the modification (105 CMR 595.034).

- (c) **If an order is issued, sustained, or modified but the petitioner fails to comply with the order within the prescribed time limit**, the offender may be fined by the court. The fine for the first offense is not to exceed \$100. For a subsequent offense, the fine should not exceed \$500. Each day's failure to comply with an order shall constitute a separate violation.

- c. **If an establishment is selling food for a few days only (e.g., carnival, fair, church supper)** a temporary permit may be granted. This permit should not exceed **14 days** (105 CMR 595.032).

The board of health or its employee should check whether the food is coming from an approved source and what refrigeration/heating facilities will be used to prevent spoilage.

Catering services, which either prepare or serve food in a town, should be inspected when their catering services are being rendered, before food is served, to ensure that they are taking adequate care to keep foods fresh and at proper temperature during transport and temporary storage, and to check on cleanliness of personnel and equipment, wholesomeness of food, and adequacy of equipment.

Food poisoning is a serious hazard when food is prepared well before it is served, especially if it has to be moved from place to place after preparation. Catering services commonly prepare highly perishable foods which require extra care in handling and transport.

Since the busy season for caterers is also the hot weather season when risk of food deterioration is greatest, boards of health should take care to inspect all catered services, regardless of time of day or day of the week. If a caterer is particularly busy, s/he may hire untrained, temporary staff, rental equipment and rental trucks, the cleanliness and appropriateness of which should be carefully checked.

- d. **If a restaurant is being built or extensively remodelled** or a structure is being converted for use as a food service establishment, a copy of the plans and specifications should be sent to the board of health (105 CMR 595.037). Included in this should be:
- layout
 - arrangement of work areas
 - construction material used
 - location, size, and type of fixed equipment and facilities.

The purpose of this review is to make sure the facility is in compliance with regulations pertaining to the physical structure **before** costly renovations or additions have to be made. For example, new regulations state that the number of toilets in a food service establishment should be based on its seating capacity.

Approval of plans should be granted or denied by the board of health within **30** calendar days of the submission of plans. If no action is taken, approval is automatic (105 CMR 595.037[B]).

- e. **If a food service establishment employee is suspected of transmitting a disease**, the Division of Food and Drugs should be immediately notified. MDPH may require that at the request of the board of health or of its own initiative, the suspected employee submit to a thorough physical exam by a licensed physician. The agency requesting the examination is responsible for the expense, either MDPH or the board of health (105 CMR 595.038 [B] and M.G.L. 94:305B).

PROTOCOL III

INSPECTION OF RETAIL FOOD ESTABLISHMENTS (e.g., SUPERMARKETS, GROCERY STORES)*

(See Rules and Regulations Relative to Retail Food Establishments, 105 CMR 590.)

Step 1. **Pre-inspection: Application: A retail food establishment applies for registration to operate** (see Appendix II[15]).

The application form must include:

- a. applicant's full name and post office address. Names and addresses of partners or corporation officers should also be included.
- b. location of the proposed retail food establishment, and for any new establishment, detailed plans.
- c. signature of applicant(s).

Step 2. **Inspection: Retail food establishment is inspected to determine whether it complies with regulations pertaining to safe and sanitary operation.**

An inspection form available at the Regional MDPH office should be used as a guideline. All findings should be recorded on this form and the original copy given to the operator of the establishment. As in the case of restaurant inspections, **it is recommended that board of health members or their agent enlist the assistance of personnel from the Division of Food and Drugs, unless they are well acquainted with the inspection procedure.** In general, criteria for inspection should include:

Cleanliness:	Is the physical structure clean? Is proper drainage provided? Is garbage stored and disposed of in a sanitary manner? Are employees clean and in good health?
Water supply:	Is it safe and adequate? Proper temperature?
Toilet facilities:	Are they properly located and maintained?
Storage:	Is refrigeration equipment properly working? Are perishable and frozen foods being stored properly? Are the storage areas clean?
Food quality:	Is it wholesome and free from visible contamination?
Dating:	Is there food on the shelves with expired dates? (This is a frequently encountered violation.)
Rotation of stock:	Is the stock properly rotated to maintain wholesomeness?
Meat cutting:	Is the room properly refrigerated? Is the cutting table free from chipping or cracks?

Step 3. **Action and follow-up:**

- a. If a retail food establishment is in compliance with regulations, the Certification of Registration should be issued. If an inspection is performed on an establishment that already has a Certificate of Registration and is in compliance, no further action needs to be taken. All certificates must be posted in the retail establishment.
- b. If a retail food establishment is not in compliance with regulations, any violation should be noted on the inspection form. The operator or registrant must be notified in **writing** of the violation (see Appendix II for sample order) (105 CMR 590.026).

All tainted, diseased, corrupted, decayed, unwholesome or unfit food may be seized by the board. The food should be destroyed or otherwise disposed of; however, **it is strongly advised that the Division of Food and Drugs be contacted if there is any question concerning the food's condition.** If meat is suspected of being infected with

* All regulations referred to in this section are promulgated under Chapter 94, Section 305A of the General Laws.

contagious disease, the Director of Livestock Disease Control (617-727-3015) should be immediately notified (105 CMR 590.028).

Any food suspected of being adulterated or misbranded should be detained or embargoed for a period of 10 days. That is, it should not be disposed of or removed from the premises. A tag or other appropriate marking should be affixed to the suspected article, giving notice that the article is suspected of being adulterated or misbranded, that it is being embargoed for 10 days, and that no one may remove or dispose of the article until permission is given by the board, its agent, or the court. Within five days, the board or its agent must file a petition in district or municipal court for a libel of condemnation of the article. If the court rules that the article was not misbranded or adulterated, the article may either be reprocessed (the condition corrected) or destroyed. **It is best to contact the Division of Food and Drugs on this matter** (105 CMR 590.028).

- c. If the operator requests a hearing, following a routine inspection in which violations are found, and an order issued (105 CMR 590.027), the same procedures for a restaurant inspection hearing must be followed:

Requests should be filed within **seven** days of the day the order was served. This request must be **in writing**.

Upon receipt of request, the board of health determines a time and place for the hearing and informs the petitioner thereof **in writing**. The hearing should be held within **10 days** of the petition's filing. This time limit may be postponed if the petitioner submits a good and sufficient reason for the postponement. At the hearing, the petitioner must be given the opportunity to show why the order should be modified or withdrawn. All written transactions connected with the hearing are a matter of public record and must be available at the board of health office.

After the hearing, the board of health shall sustain, modify, or withdraw the order. It may also suspend or revoke the permit, in which case the petitioner must be informed in writing.

1. **If the permit is then revoked or suspended**, the decision may be appealed to DPH.
 2. **If the order is sustained or modified**, operator must correct the violation within the allotted time period. If this is not done, the board of health should suspend the registration. This decision can be appealed to the Department of Public Health; however, the registration must remain suspended until a decision is rendered.
 3. **If the board of health withdraws the order**, no further action is required.
- i. **If the permit is then revoked or suspended**, the decision may be appealed to DPH.
 - ii. **If the order is sustained or modified**, operator must correct the violation within the allotted time period. If this is not done, the board of health should suspend the registration. This decision can be appealed to the Department of Public Health; however, the registration must remain suspended until a decision is rendered.
 - iii. **If the board of health withdraws the order**, no further action is required.
- d. **If a retail food establishment is found to have serious or repeated violations of the regulations, or interferes with the board of health in the performance of its duties** (105 CMR 590.025), the registration may be revoked. Opportunity for a hearing must first be provided. Prior to the hearing, the registrant must be notified in writing. This notification should include reasons why the action is being taken and should advise that the registration shall be revoked in five days unless the condition is corrected.

The registration may be suspended pending revocation or a hearing.

If a retail food establishment employee is suspected of transmitting disease, the Division of Food and Drugs should be immediately notified. The board of health may request that MDPH require the suspected employee to submit to a thorough physical exam by a licensed physician. The agency requesting the examination is responsible for the expense (105 CMR 590.038; also, M.G.L. 94:305B).

OTHER FOOD MANUFACTURING, HANDLING AND STORAGE BUSINESSES

ESTABLISHMENTS FOR PASTEURIZATION AND RETAIL SALE OF MILK

Pasteurization

1. No one may operate an establishment for the pasteurization of milk without a license from the board of health of the community where the establishment is to be located (M.G.L. 94:48A).
2. Upon receipt of an application for a license to pasteurize milk, the board of health must inspect the establishment. If it is found to be in sanitary condition, the board may issue a license which is good for one year (M.G.L. 94:48A).
3. After a license has been issued, the board of health or the MDPH may order such an establishment to be closed if it is found that it is not being operated in a sanitary manner, or is in violation of any applicable rules and regulations. The license may be suspended if the necessary changes are not made within a reasonable time (M.G.L. 94:48A).

Retail Sale of Milk

1. The board of health of a city must, and the board of health of a town may, appoint one or more milk inspectors and one or more collectors of samples of milk (M.G.L. 94:33). The milk inspector is responsible for enforcing laws relative to milk supply and must keep a record of everyone in the town who sells milk. The milk inspector or collector of milk samples may enter any place where milk is produced, stored, or kept for sale, and any vehicle in which milk is transported, and take samples for analysis (M.G.L. 94:35).
2. No one may sell milk in a town where an inspector has been appointed without obtaining a license from the inspector. Anyone selling less than 20 quarts per day to consumers is not required to obtain a license (M.G.L. 94:40, 41A).
3. Any license granted may be suspended or forfeited upon conviction in any court for violation of the license. The board may also revoke any license for violation of a regulation the board of health has passed relative to the retail sale of milk. Such an action may be appealed to MDPH, which shall have the final decision (M.G.L. 94:41).
4. The milk inspector must annually furnish to Commissioner of Food and Agriculture a list of dealers holding licenses for the sale of milk, skimmed milk or cream, who purchase these goods from producers within the Commonwealth. Any revocation or reinstatement of a license must be reported to the Commissioner within 10 days (M.G.L. 94:41).

Wholesale Milk Dealer

1. A wholesale milk dealer, unless already licensed under M.G.L. 94:40 or 41, shall be licensed under M.G.L. 94:41A by the local board of health or the appointed milk inspector.

BAKERIES (from MDPH's Rules and Regulations Relative to Bakeries and Bakery Products, 105 CMR 550)

1. No new bakery may be established until the building plans and proposed equipment have been approved by the board of health. The board may refuse a permit if the sanitary requirements outlined in M.G.L. 94:2-6 and 9F-9J are not complied with.

Such a decision may be appealed to MDPH or the superior court, and the board must comply with the order of MDPH or the court (M.G.L. 94:9M).

2. The board of health must inspect all bakeries within its jurisdiction at least twice per year. The board must furnish MDPH on or before the 15th of each month, on a form supplied by MDPH, a report of all inspections of bakeries made during the preceding calendar month (Reg. 1).
3. Refer to the "Regulations Relative to Bakeries and Bakery Products," 105 CMR 550 before undertaking inspection of bakeries.

PLANTS WHICH BREAK AND CAN EGGS

1. No one may operate a plant for the breaking and canning of eggs without a license from the board of health (M.G.L. 94:89).
2. The board of health may make and enforce regulations relative to the breaking and canning of eggs, and may revoke any license for violations of these regulations after notice to the licensee and a hearing before the board (M.G.L. 94:89).

PLANTS WHICH MANUFACTURE FROZEN DESSERTS AND FROZEN DESSERT MIX

1. **Definitions:** FROZEN DESSERTS means ice cream, french ice cream, frozen custard, ice milk, sherbet, water ice, quiescently frozen confection or dairy confection, frozen dietary dairy dessert and any imitation frozen dessert. FROZEN DESSERT MIX means any unfrozen mixture to be used in the manufacture of frozen desserts or milk shakes (M.G.L. 94:65G).
2. Anyone manufacturing frozen desserts and/or frozen dessert mix (including vendor with "soft ice cream" machines) must obtain a license from the board of health.
 - a. Application for the license must be filed in February of each year; the license commences on March 1.
 - b. The license application must include the following:
 - a statement that the applicant will manufacture such products only from pure and wholesome ingredients and only under sanitary conditions
 - the location of each plant in the town where the products will be manufactured
 - the name of the brand(s) and the trade or composition name(s), if any, under which the products will be sold (M.G.L. 94:65H).
3. Before issuing a license, the board of health must inspect the plant and determine that it is maintained in a sanitary manner.

If MDPH has requested the board of health to make the inspection, the board will certify to the department on application for a permit (M.G.L. 94:65I).
4. The board of health may revoke or suspend a license it has issued if it discovers that any statement made on the application was false or misleading, or if there are any violations of the license or of M.G.L. 94:65A-65U.

The licensee must be given notice and the opportunity for a hearing before the license may be suspended or revoked (M.G.L. 94:65J).

Any decision by the board of health to refuse to grant or reinstate, or to suspend or revoke a license, may be appealed to the supreme judicial court (M.G.L. 94:65K).

COLD STORAGE WAREHOUSES

Though the Department of Public Health is responsible for licensing cold storage warehouses, M.G.L. 94:67 requires that boards of health inspect the warehouses. This should probably be done on an annual basis.

BOTTLING PLANTS (From Dept. of Public Health Rules and Regulations Regarding Bottling and Manufacturing Plants)

1. No one may operate a plant for the manufacture or bottling of carbonated non-alcoholic beverages, soda water, or mineral or spring water without a permit issued by the board of health (M.G.L. 94:10A).
2. Anyone applying for an original permit to operate a manufacturing or bottling plant must submit plans for the bottling or manufacturing establishment to the boards of health (Reg. 1, see following application form).
3. If the water supply is not public, a water analysis and description of the source must also be submitted (Reg. 1).
4. An applicant for a permit to bottle mineral or spring water must submit a description of the spring and a sketch of its location, an analysis of the water, and a statement of the methods of cleaning, sterilizing, and filling the bottles (Reg. 1).
5. The board of health must inspect the premises within seven days of receipt of the application.
The board must send to MDPH:
 - a copy of the license and application
 - a copy of the other documents filed (plans and sketches)
 - half of the licensing fee (the license fee is prescribed to be \$20).
6. Thirty days prior to the expiration of the permit, the board of health must notify the owner of the permit of the upcoming date of expiration. If the permit is not renewed, the board shall cause the operation of the establishment to cease, and shall send notice of this action to DPH (Reg. 2).
7. Regulation 3 provides guidelines for the proper sanitary conditions of the manufacturing/bottling plants. No permit may be granted and any permit that is granted may be revoked if the building and equipment are not in accordance with these guidelines.

SHELLFISH

PART I General Areas of Concern in Shellfish Management

LOCAL RESPONSIBILITIES (Refer to towns and cities bordering on coastal waters)

BOARD OF HEALTH

Enforce M.G.L. 130:81 (also enforceable by Division Director of Marine Fisheries of the Department of Fisheries, Wildlife and Recreational Vehicles), which says that no one may transport shellfish into Massachusetts or sell shellfish from outside Massachusetts without certification from the U.S. or foreign regulatory authority for interstate shellfish shipping.

ALDERMEN OR CITY COUNCIL (CITY) AND BOARD OF SELECTMEN (TOWN)

1. Authorize construction of weirs, pound nets, or fish traps in tidewaters in locations where no harbor lines exist and in locations beyond established harbor lines. Written approval of locations and construction must be given by the Dept. of Public Works and the Director of Marine Fisheries (M.G.L. 130:8 and 9).

2. Control, regulate, or prohibit the taking of eels and any or all kinds of shellfish and seaworms, including making any necessary regulations and granting licenses to plant, grow, and take shellfish and to plant cultch for the purpose of catching shellfish seed (M.G.L. 130:52).
3. Set aside an area where the commercial taking of shellfish is prohibited and where anyone from the town or city may take shellfish for family use (M.G.L. 130:52).
4. Keep complete records of all licenses granted (M.G.L. 130:62).
5. Appoint a person or persons qualified in the field of shellfish management as shellfish constable(s) or deputy shellfish constable(s). The constable shall enforce all regulations relative to shellfish. S/he shall also initiate, promote, and manage shellfisheries and try to enhance the value of the town's shellfish resources.

RESPONSIBILITIES OF THE DIVISION OF MARINE FISHERIES (OF THE STATE DEPARTMENT OF FISHERIES, WILDLIFE, AND RECREATIONAL VEHICLES)

1. Assist coastal towns and cities in increasing their production of shellfish (M.G.L. 130:20).
2. Investigate and study methods for the purification of shellfish taken from contaminated areas, in cooperation with DEQE (M.G.L. 130:20).
3. Issue permits (commercial and non-commercial) to fish for or take lobsters (M.G.L. 130:38).
4. Establish and maintain a plant(s) for the propagation of lobsters (M.G.L. 130:42).
5. Delineate and patrol restricted areas.
6. Inspect shellfish processing plants.
7. Conduct any other necessary inspections, laboratory investigations, or control measures to ensure that any shellfish reaching the consumer have been grown, harvested, and processed in a sanitary manner.
8. Issue numbered certificates to shellfish dealers who comply with the sanitary standards, and forward copies of the certificates to the USPHS.

Federal Responsibilities-Shellfish Sanitation Branch (PHS) (From DHEW's National Shellfish Sanitation Program Manual of Operations, 1965)

1. Make an annual review of each state shellfish program, including the inspection of a sample of shellfish processing plants.
2. On the basis of this review, the state program is either endorsed or rejected.
3. The PHS publishes a semi-monthly list of all valid interstate shellfish shipper certificates issued by the state authorities.

Shellfish Industry Responsibilities

1. Obtain shellfish from safe sources.
2. Provide and maintain plants which meet the sanitary standards.
3. Place proper certificate number on each package of shellfish.
4. Keep, and make available to the control authorities, records which show the origin and disposition of shellfish.

Summary of Forms and Permits

When Used

Permit to operate a Food **Service** Establishment

Issued initially prior to opening of food service establishment and after inspecting establishment.

Inspection Report Form for Food **Service** Establishments

Advised to use during inspection. A standard form is available from DPH; however, some towns prefer to develop their own form.

Application for Registration by a **Retail** Food Establishment

Submitted to the board of health prior to the opening of a retail food establishment.

Retail Food Establishment Certificate of Registration

Issued by the board of health after inspecting establishment and prior to opening. Indefinitely valid.

Inspection Report Form for Retail Food Establishments

Advised to use during inspection.

Notification of Violation

Sent to violator following inspection.

Permit to Operate a Bakery

Issued after inspection and prior to opening. Indefinitely valid.

Permit to Bottle or Manufacture Non-Alcoholic Beverages

Issued initially after inspection and prior to opening. Renewed annually.

License to Retail Milk

Issued to new establishments for retail food. Indefinitely valid.

List of Dealers Holding Licenses for Retail Sale of Milk

Furnished to Commissioner of Agriculture during month of June.

License to Pasteurize Milk

Issued following inspection and prior to inspection. Renewed annually.

Other Food-Related Licenses

Issued to new establishments. Indefinitely valid.

Case History Questionnaire

Used to investigate food poisoning outbreak.

See Appendix II(15) for:

- Case History Questionnaire
- Food service establishment permit
- Sample order
- Application for retail food establishment registration.

CHAPTER 15.

CHAPTER 15. Food Purity and Quality

- Summary of Responsibilities

- Rationale

- Protocol I:

 - Investigating a Food Poisoning Outbreak

- Protocol II:

 - Inspection of Restaurants and other
Food Service Establishments

- Protocol III:

 - Inspection of Retail Food Establishments
Other Food Manufacturing, Handling and
Storage Businesses

CHAPTER 16

INSPECTION OF PUBLIC AREAS

PART A: SCHOOL FACILITIES AND HEALTH SERVICES

BOARD OF HEALTH RESPONSIBILITIES

1. **Consider and act upon applications** by schools for permits to operate food service establishments. Such permits must be issued at least annually. The permit must be made out in **triplicate**, one copy each for:
 - a. the applicant
 - b. the Director of the Division of Food and Drugs, MDPH
 - c. local board of health files
(105 CMR 595.032; M.G.L. 111:5).
2. **Inspect** (at least every six months) kitchens and dining facilities for compliance with 105 CMR 595.000: State Sanitary Code, Article X, "Minimum Sanitation Standards for Food Service Establishments" (see Food Purity and Quality, Chapter 15).
3. With cooperation of local building and fire inspectors and DEQE, **conduct sanitary inspections of school facilities** (per *Administrator's Guide for the School Health Program*, 1979, MDPH).
4. The school committee or board of health or superintendent, district or union shall **provide the services of school physician(s)** and of school nurse(s) who are registered to practice in Massachusetts (M.G.L. 71:53-57).*

Required activities of the school physician include:

- a. health appraisals
 - for children who do not have this service provided by a family physician, upon entering school and at intervals specified by MDPH regulations, currently every three or four years (M.G.L. 71:57)**
 - for children applying for health certificates in order to get employment permits under M.G.L. 149:87
 - for children returning to school after an absence because of infection or exposure to any disease dangerous to the public health, if the students do not have a certificate that the danger of their conveying the disease has passed
 - for examination of teachers, janitors and school buildings as, in the physician's opinion, the protection of the health of pupils may require.
- b. examination of the feet of school children to ascertain defects which might unfavorably influence their health or physical efficiency or both. This examination may also be performed by a podiatrist (M.G.L. 71:57).
- c. assignment of physician or person who has completed a full course in emergency medical care (defined in M.G.L. 111C:6) to every interscholastic football game played by any team representing a public secondary school in Massachusetts, to be paid by the host town, (M.G.L. 71:54A).
- d. carry out other responsibilities of the school health program, including "Core" evaluations, etc. (M.G.L. Chapter 71B, Chapter 766 of the Statutes of 1972).

* The Department of Education may exempt towns having a valuation (i.e., total for assessed property value) of less than one million dollars from the requirement to provide a school nurse (M.G.L. 71:53).

** This service must also be made available to students in private schools at parental request.

5. The school committee or board of health or superintendent, district or union must:
 - a. **test every child** in the public schools annually for hearing and vision problems (M.G.L. 71:57, and Regulations for the Physical Examination of School Children, 105 CMR 200.000)
 - b. **provide postural screening** (for scoliosis) annually for children in grades 5–9 (105 CMR 200.000).

The requirement for annual hearing and vision screening may be waived if the school committee obtains approval from MDPH for an equal or more extensive alternative health program.

6. **Receive reports** from superintendent of schools of any child sent home from school because of infection with a disease dangerous to the public health (M.G.L. 71:55A).
7. If MDPH or DEQE delegates to the board of health responsibility for inspection for conformance with state codes and regulations, **carry out such inspections** and make necessary reports and orders to correct violations.
8. If the board of health is the provider of school health services, **it must be fully aware of its responsibilities** to hire necessary personnel, complete and maintain required records, provide physical examinations, hearing, vision and postural screening to public school students and to private school students upon request of parent or guardian (M.G.L. 71:57), provide emergency first aid, ensure a healthy school environment, ensure that parents are notified of any health problem or physical defects identified by school or board of health staff, obtain necessary certification for dispensing psychotropic drugs, and develop guidelines for administration of other medication. Depending on local school committee policy, the health service program should also be available to assist in the implementation of mandatory health education programs and special education programs.

Legal aspects as well as procedures and recommendations for carrying out these responsibilities are fully described in the *Administrator's Guide for the School Health Program*, 1979, MDPH, Division of Family Health Services.
9. **Investigate nuisance complaints** re: unsanitary toilet facilities, causes of sickness, filth, etc., under authority of M.G.L. 111:122.

RECOMMENDED BOARD OF HEALTH ACTIVITIES

1. Cooperate with and provide assistance to the local school committee in order to enhance and maintain a healthy school environment. One model used effectively in some communities is an "inspection team," including the sanitarian of the board of health, the school physician, the school nurse and school custodian; who report their team findings to the administration.
2. Expedite asbestos removal programs as described below in section on "Special Problem: Asbestos in Schools."
3. Cooperate with the local school committee to develop comprehensive health education activities that are well integrated with health services and make good use of community resources. Public health nursing personnel can be especially valuable in this role.

SCHOOL COMMITTEE RESPONSIBILITIES

If so determined by local ordinance, provide school health services as listed under board of health responsibilities number 3, 4, 5 and 8 above.

STATE RESPONSIBILITIES (MDPH, Division of Family and Health Services; Department of Education; DEQE; Fire Marshal; Department of Community Affairs; Office for Children)

MDPH

1. Approve all personnel who administer vision and hearing tests (M.G.L. 71:57).
2. Furnish report forms and test cards to keep a physical record of each school child; approve any alternate forms used by local system (M.G.L. 111:185A).
3. Establish criteria (rules and regulations) for physical examination of school children (M.G.L. 71:57).
4. Waive, upon written request, certain regulations regarding physical examinations for the purpose of allowing the development of **equal or more extensive** alternative health service programs which can more effectively and efficiently meet the needs of students.
5. Certify requests to administer psychotropic drugs to individual students and establish regulations which set forth the certification procedures (M.G.L. 71:54B).
6. Provide diagnosis and treatment of orthopedic, neurologic, cardiac, and oro-facial problems, myelodysplasia, cystic fibrosis, PKU and other inborn errors of metabolism, through the Services to Handicapped Children's Program.

Other Departments

Refer to the *Administrator's Guide for the School Health Program, 1979*, MDPH Division of Family Health Services.

RATIONALE

Boards of health share with other local and state officials the responsibility for ensuring that schools are as safe as possible, and that they provide a good environment for learning. The board has specific duties regarding food services, communicable disease control, and physical facilities. In towns where the board of health, rather than the school committee, provides school health services, the board must provide programs and staff to meet the minimum standards set by state regulations and local goals and objectives set by the board and/or the school committee. Boards of health and school committees can work together effectively through joint planning committees, school and safety committees, or other organizational modes to provide high quality health services and educational programs in an efficient manner.

Refer to the *Administrator's Guide for the School Health Program* for further details and suggestions.

SPECIAL PROBLEM: ASBESTOS IN SCHOOLS

Asbestos is known from studies of occupational exposure to be a human carcinogen, but significant exposure in schools is a recently determined, unfortunate possibility. From 1940 to 1973, asbestos-containing materials were widely used in school construction because of insulating, fire proofing and sound-deadening qualities. In 1979, due to growing evidence about the hazards from sprayed asbestos-containing mixtures in classrooms, the EPA developed an asbestos control program and guidance handbooks now available from the Regional Offices of the EPA. Because the full extent of the national problem is not known, the program is voluntary on the part of local officials and there are no special state or federal funds available. But the problem is serious. Each school year of exposure to friable asbestos (i.e., asbestos that crumbles so that fibers escape into the air) increases the risk of cancer 20 to 30 years later, according to contemporary knowledge.

The board of health may act to **ban** the use of asbestos-containing materials in construction or renovation of school buildings, other public buildings, and homes. The board of health may **order** the removal, encapsulation, or, by other methods, the reduction of the quantity of asbestos fibers below one fiber per cubic centimeter, or a stricter standard than may be recommended by DEQE or EPA. If legal persuasion is needed, M.G.L. 111:31C or M.G.L. 111:122 is available for preparing formal "orders" to responsible officials.

M.G.L. 111:150A authorizes the board of health to assign any parcel of municipally-owned land as an asbestos disposal site. If the municipality operates an approved sanitary landfill, a special section may be used for proper disposal (see Chapter 8, Solid Waste Disposal).

Health Effects of Inhaled Asbestos Fibers

Lung cancer, gastrointestinal cancer, and mesothelioma have been statistically associated with people such as textile workers and asbestos insulation workers who were exposed occupationally to asbestos.¹ The observed number of cancer deaths among 19,112 asbestos workers from three study groups are greater than expected in general population groups, and greater for each type of cancer and all cancers. The magnitude of "greater than expected" varies from twice to about eight times more observed deaths than expected deaths. Further, mesothelioma is so rare in the general population that expected deaths are not available for statistical comparison. This information suggests that exposure to air-borne asbestos fibers causes mesothelioma. The period of study of these three occupational groups varied from 10 to 28 years, revealing the latency period of 20 or more years from onset of exposure to diagnosis of cancer. The Occupational Safety and Health Administration (OSHA) has mandated a standard of 2 fibers/cubic centimeter under authority of the "Clean Air Act" to protect workers against asbestosis.

The following concerns are being raised regarding potential hazards in school classrooms treated with asbestos-containing materials.²

"Friable" material crumbles to the touch and readily releases asbestos fibers to the **indoor** air from vibration, contact, or deterioration over time.

Though the exposure levels are less than 2 fibers per cubic centimeter, persons in classrooms are continually exposed on school days, so that at an exposure level of 2 fibers/cc, a person may inhale 6.4 million fibers over an eight-hour period.

Allowing a 50 percent retention of inhaled fibers, multiply by the number of days in a school-year, and multiply that by 12 years of schooling — the total dose cannot be overlooked.

Boards of health and school committees must appreciate the need to embark on a cooperative asbestos control and surveillance program immediately.

RECOMMENDED ACTION REGARDING ASBESTOS IN SCHOOLS

1. Meet with School Committee to determine whether:
 - a. new school buildings were constructed or old buildings renovated during 1940-1973.
 - b. construction contracts specify that asbestos-containing materials were sprayed on walls and ceilings of such buildings.
2. Prepare a report (or School Committee may) to DEQE including:
 - a. inventory of buildings that have been (or may have been) treated with asbestos-containing materials.
 - b. request for technical assistance regarding analysis of samples and determination of indoor air contamination with asbestos fibers per cubic centimeter.
3. Assist school officials in the preparation of contracts for removal of asbestos-containing materials to ensure that:
 - a. water with wetting agent is applied.
 - b. non-friable (wetted) asbestos is sucked up as a slurry into a closed vacuum truck system.
 - c. contaminated work clothes and equipment are contained on site in sealed plastic bags.

4. Hold necessary hearings, assign asbestos disposal sites and obtain approval from DEQE (see Chapter 8, Solid Waste Disposal), in order to arrange for expeditious disposal of asbestos wastes. Instruct contractor to give advance notice of each shipment to disposal site operator who:
 - a. has an approved separate location for disposal.
 - b. provides water supply to maintain wetted condition of site during disposal, and covers daily delivery.
5. Obtain, through DEQE or the Regional Office of EPA, Office of Toxic Substances (OTS), a "Guidance Package" in non-technical language which provide detailed information and recommendations for removal, encapsulation, or enclosure of asbestos materials in structures. If this guidance package is not available in the school superintendent's office or the board of health office, it should be ordered and reviewed before removal of asbestos-containing materials.

DEFINITIONS

1. **Friable asbestos material.** Any material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to a powder, when dry, by hand pressure.³
2. **Cementitious asbestos material.** Any material that contains more than one percent asbestos by weight but is relatively durable though it can release fibers when damaged by water (as roofing material) and mechanical forces greater than hand pressure.
3. **Non-friable asbestos material or wastes.** Wetted and so maintained with water treated with wetting agent during handling, transporting and disposal. NOT a "hazardous substance," acceptable for controlled disposal in authorized sanitary landfill.
4. **Properties of asbestos** which make it suitable for disposal by sanitary landfill:
 - a. The mineral fibers resist degradation and are inert and insoluble in water. As such, they do not represent a threat to ground-water supplies as the result of leaching.
 - b. Because of its fibrous nature, asbestos tends to lodge in the voids between individual grains of sand and gravel, unless the material at the point of land disposal is exceptionally coarse or the area is subject to flooding.

PART B: DAY CARE FACILITIES

BOARD OF HEALTH RESPONSIBILITIES

1. **Inspect food service facilities** of day care centers for children, serving meals to 13 or more people per day, and of day health services for adults. This applies to **all** day care centers, whether they are in towns in which overall inspection responsibility has been delegated to the board of health by the Office for Children or not. The inspection must follow the Guidelines established in Article X of the State Sanitary Code, Minimum Sanitation Standards for Food Service Establishments.

(See Chapter 15 on Food Purity and Quality, and see Regulation 500.01 of the Office for Children Group Day Care Center Regulations, 102 CMR 7.00)

2. Any private well or water source must be approved by the local board of health, for child or adult day care centers (Regulation 500.05 of Group Day Care Center Regulations, 102 CMR 7.00)
3. If the Office for Children has delegated responsibility to the board of health for licensing day care facilities, the board of health shall inspect day care facilities to determine compliance with Office for Children Group Day Care Regulations, 102 CMR 7.00. Inspection should be made initially upon receipt of the application and every six months after the license has been granted (M.G.L. 28A:12).

OTHER LOCAL RESPONSIBILITIES

1. All children's day care facilities must be inspected annually by the local building inspector (or by the Massachusetts Department of Public Safety). (Regulation 500.01 of Group Day Care Center Regulations.)
2. Adult day care centers must be inspected annually by the local fire inspector and building inspector to qualify for certification (106 CMR 404).

STATE RESPONSIBILITIES

1. Children's day care facility-licensing is the responsibility of the Massachusetts Office for Children. Some boards of health have been delegated by the Office for Children to be the licensing bodies for day care facilities within their communities. The Office for Children Group Day Care Regulations (available from the State Bookstore, Room 116, State House, Boston) provide guidelines for licensing and inspection of day care facilities.
2. The Office for Children requires all day care facilities for children to have certificates that indicate that they are free of hazardous lead paint. Some towns and cities may have lead paint detection equipment and may issue these certificates themselves. If not, MDPH will do it. (Regulation 500.03, Group Day Care Regulations.)
3. The Department of Public Welfare Division of Day Health Services (617-727-5438) certifies adult day programs for participation in the medicaid program. Regulations for adult day health services are numbered 106 CMR 404. MDPH may impose an emergency licensing procedure using 106 CMR 404 as guidelines for adult day care centers not participating in the medicaid program.

RATIONALE

Children's Day Care

Day care services for children play an important societal function of providing both care and developmental stimulation for many children in the Commonwealth. The Office for Children, established in 1972 (M.G.L. 28A, statutes of 1972, chapter 785), has assumed the major responsibility for "promoting the development of day care services" and ensuring that they provide both adequate care and protection and an environment for sound development.

M.G.L. 28A:12 enables the director of the Office for Children to delegate on an annual basis to any city or town the power to issue, suspend, revoke, make probationary or renew licenses for day care facilities (pursuant to regulations 106 CMR 404) **provided** that the city or town demonstrates that the delegation will result in more effective exercise of such power. Cities and towns accepting this responsibility must apply the same rules and regulations used by the state agency.

Boards of health must ensure that food and water provided to children in day care facilities are safe and pure, and they should ensure that day care facility operators are aware of communicable disease and immunization requirements, and local refuse disposal requirements. Any individual sewage disposal system being built or modified for day care facility use also comes under local board of health supervision.

Adult Day Care

Adult day care facilities are under the jurisdiction of the Department of Public Welfare's Division of Adult Day Health Services.

Medicaid is the only major funding source for adult day care centers in Massachusetts. The Department of Public Health has waived all licensing requirements, but centers must obtain Medicaid certification and approval before they may operate. A center submits its original proposal to an inter-

agency commission composed of members from Department of Public Health, Department of Mental Health, Department for Elder Affairs, and the Rate-Setting Commission, which carefully reviews the proposal in terms of need, financial viability, support from other community agencies, etc. A decision is then made whether to certify and approve the center.

If for some reason, Medicaid is not being used as a funding source for an adult day care center, the Department of Public Health will impose an emergency licensing procedure using the Adult Day Health Services Regulations (106 CMR 404) as guidelines.

PART C: LONG-TERM CARE FACILITIES

BOARD OF HEALTH RESPONSIBILITIES

1. **Inspect** (at least twice a year) and provide permits for operation of food service establishments in licensed long-term care units (includes snack bars as well as cafeterias and kitchens). Enforce Article X of the Sanitary Code, re food service establishments. Until December 1979, local boards of health were required to inspect long-term care facilities to determine suitability of the facility. This prerequisite for a license was removed from M.G.L. 111:71 and from the regulations for long-term care licensees in December 1979, by the Acts of 1979, Chap. 773. Note (item 3 below) that the board of health retains its inspection rights under M.G.L. 111:72.
2. **Enforce** state and local regulations regarding housing, water supplies, sewage disposal, and solid waste disposal. (If the facility is **not** part of the public water supply or sewage disposal systems, it must obtain DEQE approval of water sources and sewage disposal system)
3. **Notify** the Office of Long-Term Care (617) 727-6240 at MDPH of complaints, problems or potential violations of state standards and licensing requirements, including 105 CMR 150.000: General Standards of Construction for Long-Term Care Facilities; 105 CMR 192.000 Physical Environment Standards for Skilled Nursing Facilities in Massachusetts. M.G.L. 111:72 specifies that the board of health or its agents may at any time visit and inspect such institutions as convalescent or nursing homes, infirmaries, rest homes, charitable homes for the aged or intermediate care facility for the mentally retarded. Any person making such an inspection must record in writing every violation s/he finds of applicable rules and regulations of MDPH.

OTHER LOCAL RESPONSIBILITIES

1. Prerequisites for license include:
 - a. for an original license, written zoning approval on a form provided by MDPH (105 CMR 150; M.G.L. 111:71 and local ordinances).
 - b. certificate of inspection by the head of the local fire department, certifying compliance with local ordinances (105 CMR 150; M.G.L. 111:71).
 - c. certificate of inspection by local wire inspector (or if none, by the state wire investigator) on form provided by MDPH, certifying that the premises are in compliance with local wiring codes (105 CMR 105; M.G.L. 111:71).
2. The board of health and other local agencies are likely to be involved on a continuing basis in regulating or providing assistance or advice regarding:
 - a. water supply and sewage disposal
 - b. solid waste disposal
 - c. pest control
 - d. disaster plan

- e. fire prevention
- f. community activities and recreation
- g. discharge planning, and coordination
- h. disease control and reporting
- i. certificates of death and burial permits
- j. sanitary aspects of food services, buildings and grounds.

The board of health should have on hand the Regulations for Licensees of Long-Term Care Facilities (105 CMR 105.000) and be familiar with the standards and prerequisites for licensure.

Boards should notify the Office of Long-Term Care, MDPH, 80 Boylston Street, Boston, Mass., (617) 727-6240, of potential violations of state regulations, or of federal medicare/medicaid certification regulations.

STATE RESPONSIBILITIES (MDPH, DEQE)

1. The MDPH Office of Long-Term Care licenses and inspects long-term care facilities to check and enforce compliance with state standards and with federal certification requirements for participation in medicare and medicaid programs.
2. DEQE must approve any non-public water sources or sewage disposal systems before a license can be granted by MDPH.

RATIONALE

Although the state Office of Long-Term Care handles licensing and inspections responsibilities other than the inspections for compliance with Article X of the Sanitary Code (Regulations of Food Service Establishments), local boards of health need to ensure that all long-term care facilities are disposing of sewage and refuse properly, reporting all cases of food poisoning and other reportable diseases, and following proper procedures regarding reporting and handling of deaths (see Chapter 5, Reporting and other Data Management Responsibilities, and Chapter 20, Communicable Disease Reporting and Control). If a board of health provides home health services or community clinics, the board may also need to coordinate services and work to enhance continuity of care with long-term care facilities in the community.

Cooperative relationships and open communication between the board of health and the various providers of health services in the community should facilitate compliance with reporting requirements and sanitary standards, and should result in better care for patients.

PART D: RECREATIONAL CAMPS FOR CHILDREN

BOARD OF HEALTH RESPONSIBILITIES*

1. **Ensure** that recreational camps for children operated in the municipality (wholly or in part) are safe and sanitary; in particular, that they are operated in compliance with the minimum standards established by MDPH in the State Sanitary Code, Chapter IV (105 CMR 430.000), and with local health, fire, and safety regulations (M.G.L. 111:30 and 127A; M.G.L. 140:32A-E).
2. **Consider and act upon any application** for a license to operate a recreational camp for children (105 CMR 430.810; M.G.L. 140:32A-C).

* Chapter IV of the State Sanitary Code (105 CMR 430.000) has been revised, effective in 1981. Refer to the code currently in effect for the present specific regulations.

- a. Applicants for an original license must file with the board of health a plan showing buildings, structures, fixtures and facilities, including the proposed source of water supply and sewage disposal works. Plans for proposed source of water supply and sewage disposal must be submitted to DEQE (by board or applicant) for approval. Approval must be obtained before the board of health issues a license (105 CMR 430.812). M.G.L. 140:32B sets the license fee at \$10.
 - b. Camps operated by a municipality or state agency on municipal or state land need not be licensed, although they must comply with Chapter IV of the Sanitary Code, 105 CMR 430.000.⁴ Camps operated by persons other than municipal, state or federal agencies must be licensed, whether they are on private, municipal, state or federal land. Day camps, residential camps, and temporary camps must all be licensed, whether they are on private, municipal, state or federal land. Refer to Sanitary Code, Chapter IV, for definitions. Neighborhood playgrounds are not covered by Chapter IV (see *Advisory Bulletin* from Commissioner of Public Health, 2/22/79).
 - c. Notify MDPH and DEQE when a license has been granted, renewed, suspended or revoked (M.G.L. 140:32B).
 - d. Specify on the license the maximum number of campers allowed at any one time.
 - e. File written notice of any grant of variance with the Commissioner of Public Health of the Commonwealth (105 CMR 430.840).
 - f. Licenses may be renewed annually upon application, without public notice or hearing (M.G.L. 140:32B).
3. **Consider and act upon applications** for permits to operate food service establishments for recreational camps; conduct required inspections to ensure compliance with Article X of the State Sanitary Code, 105 CMR 595.000 (see Chapter 15 of this Guide, "Food Purity and Quality").
 4. **Inspect** recreational camps in the municipality (M.G.L. 140:32B), and issue orders for correction as necessary (see below, and see Chapter IV of the Sanitary Code, 105 CMR 530.830-833), or use emergency powers, as provided for in 105 CMR 400.100, Chapter I of the Sanitary Code, as necessary to protect the health and safety of the occupants or the public.

Inspections should include checks for compliance with minimum standards set forth in Chapter IV of the Sanitary Code, 105 CMR 430.000, Sanitary Standards for Recreational Camps for Children; Article X of the Sanitary Code, Minimum Standard for Food Service Establishments; Title 5 of the State Environmental Code, Minimum Standards for Subsurface Sewage Disposal Systems (310 CMR 15.00); and standards for swimming pools and bathing beaches where applicable (310 CMR 16.00 and 17.00).

5. **Hold hearings as necessary**, as provided in the Sanitary Code, for persons requesting a variance or opposing an order of the board of health, before granting an original license, and before suspending or revoking a license.

STATE RESPONSIBILITIES (MDPH AND DEQE)

1. MDPH: Establish minimum standards, monitor board of health activity in enforcing compliance, and advise boards of health regarding inspection and enforcement of standards for recreational camps.
2. No water is to be obtained from a non-public supply before MDPH approves the source **in writing** (105 CMR 430.250).
3. DEQE shall inspect a camp to ensure that the source of the water supply and the works for the sewage and wastewater disposal are sanitary (M.G.L. 140:32B). If violations are found, DEQE reports the violation to the board of health for action. DEQE may assist in scheduling or conducting water tests, and may require that water testing be done on a regular schedule.

RATIONALE

The goals of licensing and inspection of recreational camps* are to limit or prevent disease transmission, and to limit or prevent accidents. To this end, the drinking water must be proven safe before the camping season begins; waste water must be safely disposed of; poor drainage must be corrected before the mosquito season starts; screened windows and doors must be repaired before the fly season starts.

The fresh air in sylvan environments cannot prevent transmission of respiratory infections in overcrowded housing. Fresh air cannot prevent the growth of food-poisoning bacteria when refrigeration is inadequate, nor eliminate the stench from neglected toilet and lavatory facilities.

Nationwide, there were 534 reported deaths in recreational and sporting areas, and there were 250,000 camp-related accidents during the most recent year for which statistics are available. It is essential for the campers' safety that the camp environment be as hazard-free and the children as closely supervised as possible. Medical staff and equipment must also be competent to handle accidents and illness at the camp or on any overnight or day trips.

When children are first introduced to a strange camp environment, they are understandably prone to accidents. When they are introduced to a strange **and** unsafe environment, they may get hurt seriously if they stumble. Unsafe man-made conditions include slippery and broken duck boards, exposed nails, unsafe electrical switches or wiring, and broken glass. Unsafe natural conditions include steep grades, exposed sharp rocks, briars, allergenic weeds and dark waters with muddy bottoms. These must be identified and countered by designing paths carefully, cutting away hazardous bushes and stumps, replacing slippery areas with sand, putting up warning signs, and in general anticipating potential dangers. Chapter IV of the Sanitary Code (105 CMR 430.000) sets **minimum** standards in the following specific areas:

- site selection
- housing
- bedding, equipment, and maintenance
- food service areas and facilities and food quality (must comply with Article X, 105 CMR 595.000)
- water supply
- toilet facilities
- lavatories and showers
- sewage disposal
- refuse storage and disposal
- insect and rodent control
- swimming pools and bathing areas (must comply with 310 CMR 16.00 and 17.00)
- safety and fire prevention
- medical and nursing care
- communicable diseases to be reported, isolation requirements
- other illnesses
- physical examination **prior to admission**
- temporary camps (must have a license from the board of health)
- overnight camping (supervision, care, food and water purity, first aid)
- curtailment of utilities or services
- camp program

* According to Section 430.000 of the Proposed Chapter IV **Recreation Camp for Children** means "any camp, primitive or outpost camp, residential camp, short term group camp, travel camp, or trip camp on private or public land which is conducted wholly or in part for recreational or instructional purposes and accommodating for profit or under philanthropic or charitable purposes five or more children who are not members of the family or personal guests of the operator. It shall also mean program and/or activities promoted or advertised at a camp regardless of the program advocated and shall also include sites and facilities primarily designed for other purposes such as (but not limited to) schools, playgrounds, resorts, hospitals, wilderness areas, and government lands."

PROCEDURES

1. Inspecting Recreational Camps for Children

M.G.L. 140:32C states that the board of health is responsible for making inspections of recreational camps from "time to time." The board may establish the frequency of the inspections. Review carefully the minimum standards provided in Chapter IV (previously Article IV) of the Sanitary Code, 105 CMR 420.000. If a camp is found to be in violation of the Sanitary Code, the board should order corrections to be made, within specified time limits. If drinking water is unsafe or inadequate, the board may order provision of a safe supply. The board of health may, after public notice and hearing, suspend or revoke the camp's license. See Appendix for sample inspection form.

2. The board of health shall cause samples to be taken of drinking water obtained from private sources, and shall cause analyses of the drinking water to be made to determine if the water is fit for drinking. This shall be done at least annually; DEQE may perform initial tests, or advise regarding a schedule for testing.

3. Serving orders: If upon inspection by the board of health, violations of Chapter IV of the Sanitary Code are found, the board of health shall issue an order to the operator of the camp to comply with the provisions of the article. However, if upon inspection it is found that a building used for human habitation is violating the code to the point where it endangers or materially impairs the health, safety, or well-being of the occupants or the public, the board of health may order the building condemned and vacated if occupied.

See Appendix II(16) for Recreational Camp Inspection Form — Draft for compliance with proposed regulations.

PART E: FARM LABOR CAMPS

BOARD OF HEALTH RESPONSIBILITIES

1. If MDPH delegates to the local board of health the responsibility to make the annual inspection required to determine compliance with the "Housing and Sanitation Standards for Farm Labor Camps," (State Sanitary Code, Chapter III, 105 CMR 420.000 and M.G.L. 111:128G), the inspection must be made and report filed with MDPH within 30 days of notice of such delegation. MDPH then orders necessary corrections of violations (105 CMR 420.820).
2. If the board receives any written complaint about a farm labor camp, it must promptly forward the complaint to MDPH for investigation within 30 days (105 CMR 420.821 and M.G.L. 111:128G).
3. Enforce local regulations, and respond to any non-written complaints initiated by farm workers. 105 CMR 420.800(B) specifies that "the provisions of this chapter shall not be construed to limit or restrict the powers or duties of local boards of health" (M.G.L. 111:128G).

RECOMMENDED ACTIVITIES OF BOARD OF HEALTH

1. Maintain file of known farm labor camps in town or city.
2. Have copies of 105 CMR 420.000, State Sanitary Code, Chapter III, Housing and Sanitation Standards for Farm Labor Camps, available for camp operators, particularly new applicants for certificate of occupancy.
3. Advise new applicants on criteria for **location of housing facilities**, as specified in 105 CMR 420.000, and on sanitary standards for operation and maintenance as set forth in the regulations.
4. Have available current MDPH application forms for obtaining certificate of occupancy. Certificates expire at the end of each calendar year. Operators of farm labor camps must apply for new certificates 60 days prior to expected camp opening.

5. Where private sources of water are used, the source must be approved by DEQE. MDPH requires the farm camp operator to have a sanitary analysis of the supply made at least once prior to seasonal occupancy. Cities/towns that employ registered sanitarians and have approved laboratories may provide this service.
6. Inform other town departments of location and population of farm labor camps, and encourage them to offer educational and recreational services within the context of their programs (M.G.L. 111:128H).

STATE RESPONSIBILITIES

MDPH

1. Accept and act upon applications for certificates of occupancy, which a farm labor camp must have before it is operated or occupied by workers (105 CMR 420.819; M.G.L. 111:128G).
 - a. The certificate of occupancy application must be returned to the Department of Public Health at least 60 days prior to the opening of the farm labor camp. The Department may waive the 60-day notice requirement in the case of an emergency when the farmer is threatened with a crop loss. In such a case, the Department should inspect the camp immediately (105 CMR 420.819).
 - b. Certificates of occupancy for farm labor camps expire annually on December 31.
2. Inspect each farm labor camp annually to determine compliance with Chapter III of the Sanitary Code, or delegate this responsibility to the board of health of the town in which the camp is located (105 CMR 420.820).
3. If the Department receives a signed, written complaint, it must investigate the alleged violation of the Sanitary Code within a 30-day period (105 CMR 420.821).
4. If the Department determines a violation of the sanitary code exists in a camp, it may revoke the certificate of occupancy (105 CMR 420.812) or order the person responsible to comply (420.830).
5. MDPH shall require that sampling and analysis of drinking water from private sources be performed at least once before seasonal occupancy or more often if appropriate (105 CMR 420.454).
6. DEQE must issue a permit before any chemical toilet or privy is used at the camp (105 CMR 420.531).
7. M.G.L. 111:128H (as amended in 1967) states that as part of its inspection of a farm labor camp, MDPH shall determine what educational and recreational opportunities may be available in the camp, and shall encourage the development of such opportunities in cooperation with local and state agencies.
8. There must be included in the certificate of occupancy a statement that the workers have the right to enter and leave the premises of the employer during the period of their employment (M.G.L. 111:128H).
9. Workers living in quarters apart from the employer's living quarters must be permitted to have reasonable rights of visitation in their living quarters outside of regular working hours, and notification of this right shall be published in English and in Spanish on the posted certificate of occupancy (M.G.L. 111:128H).

RATIONALE

The goal of the state regulatory program for farm labor camps is to keep the farm laborer healthy and to protect his/her personal rights. The job may expose him/her to heat, dust, and pesticide residues. The cumulative and prolonged effect of these exposures varies from irritation to overt toxicity. It is, therefore, imperative that the worker practice "good personal hygiene" and have adequate facilities to do so.

Specifically, there is need for handwashing and bathing facilities, clean personal towels, laundry facilities, ample water in camp and at the work site, and sanitary toilet facilities. Good housing free of dust, noise, and malodors; clean bedding and adequate, well-ventilated space that is free of mosquitoes and other annoying insects; cooking and eating facilities that are adequate for preparation of three nutritious meals a day, protected from flies and roaches; easily cleanable work and serving surfaces, and refrigeration and other storage facilities are the basics for "good general hygienic practice."

The camp operator who maintains the housing and sanitation standards of the Sanitary Code and helps encourage good personal hygiene practices preventive medicine and provides the basics for good morale and attitudes of the farm worker. Recreational and educational opportunities offered by voluntary social agencies or official town departments can contribute to worker morale. Official and voluntary groups in the host community should have a positive, **not** disruptive, interest in the temporary residents, the farm workers.

Chapter 718 of the Acts of 1967 of the Commonwealth of Massachusetts emancipated farm laborers from substandard living accommodations and from confinement to assigned premises during the period of employment. Section 128G in Chapter 111 of the General Laws orders: "The Department (MDPH) shall annually inspect all farm labor camps . . . or in lieu thereof, may delegate any such annual inspection to a local board of health." Further, the **Department** issues a certificate of occupancy **if** the accommodations conform with the State Sanitary Code, Chapter III. The operator of the camp must apply for such certificate **60** days prior to the expected opening date.

As part of its inspection of a site for a farm labor camp, MDPH must also "determine what educational and recreational opportunities may be available for migrant workers, and shall, as far as is practical, encourage the development of such opportunities in cooperation with local and state agencies." Further, "The department shall protect the right of the migrant worker to enter and leave the premises of the employer during the period of his employment, and shall include in its certificate of occupancy a notification to the worker that such right exists . . ." This "right" is expressed and posted as part of the certificate of occupancy. Two additional rights of the workers include reasonable rights of visitation in his living quarters outside of regular working hours, and the right to write complaints regarding violations of the Sanitary Code to be filed with the Department or the local board of health.

While MDPH has the authority to approve issuance of the certificate of occupancy, to investigate complaints of violations, and to revoke a certificate if violations are sustained during a hearing, the board of health may be delegated to inspect the camp when the services of a registered sanitarian, or other person of equal competency to make such inspection, are available. The board of health also retains its usual powers and duties to respond to reports of outbreaks of communicable diseases, insect and rodent infestations, lice infestations, improper use or storage of agricultural pesticides, and other violations of law or the sanitary code which may or may not have been the subject of a formal complaint. Prompt response by the local board of health to such reports is essential to prevent prolonged exposures which may result in serious injury or disease to the farm workers and reduce the labor force during a time of need.

DEFINITIONS

Enforcement of the State Sanitary Code, 105 CMR 420, requires a common understanding of the terms: Farm Labor Camp, Farm Activities, and Operator.

Farm Labor Camps means any tract of land, including all buildings, vehicles, and other structures located thereon, any part of which contains sleeping facilities made available in connection with the employment of laborers in farm activities and living apart from the operator's household, and which are occupied or intended for occupancy by two or more such laborers or members of their families and for whom the facilities are provided in connection with their employment.

Farm Activities means those activities carried on in connection with, including but not limited to, the production or processing of agricultural or horticultural products such as fitting, planting, cultivating, harvesting, vining, grading, packing, storing, canning, freezing, dehydrating, bottling, and preserving or treating by any method.

Operator means any person who alone or jointly with others owns a farm labor camp, or has care, charge, or control of a farm labor camp as an agent or lessee of the owner or as an independent contractor.

PART F: DEVELOPED FAMILY TYPE CAMPGROUNDS

BOARD OF HEALTH RESPONSIBILITIES

1. **Consider and act upon applications** for original licenses or annual renewals of licenses to operate family-type campgrounds (M.G.L. 140:32B; 310 CMR 14.00, "Minimum Standards for Developed Family Type Campgrounds," regulations published 5/1/80).*

Procedures

- a. Original and renewal license applications are filed with the board of health. Licenses expire on July 1st and must be renewed annually (310 CMR 14.21).
 - b. Original applications are subject to public hearings, due notice of which must be published in a local newspaper.
 - c. The applicant must file with the board of health and DEQE a plan showing all buildings, water supplies, and works for the disposal of sewage (310 CMR 14.21[3]).
 - d. The board of health may grant or renew the license only after it and DEQE have approved the plans.
 - e. Applications for renewal must specify to the board in writing what alterations have been made, if any, to the water supply and distribution systems, sewage disposal system, dumping facilities, capacity of basic and safari campgrounds, and any other substantive changes.
 - f. Applicants for renewal shall also present a report from a state laboratory approved for microbiological analysis of drinking water. This report must indicate that the drinking water sources are safe, and if natural swimming areas are offered, that the quality of the swimming water is satisfactory.
 - g. The license must state the maximum number of campsites which may be occupied at any time at the camp, and this capacity may not be exceeded at any time.
 - h. Before granting or renewing the license, the board should inspect the campground to ensure that the sanitary standards outlined in 310 CMR 14 are being met.
2. **Periodically inspect** the campgrounds within its jurisdiction. This should be done before a license is issued or renewed, and also during the high-use season when there is a tendency to strain the capacity of the camp (M.G.L. 140:32C).

If any violations of 310 CMR 14.00 are found, the board must issue orders for their correction (310 CMR 14.22), either under the emergency provisions of Title 1 of the Environmental Code (310 CMR 11.05) or under the provisions of 310 CMR 14.22.*

STATE RESPONSIBILITY (DEQE)

DEQE must receive and approve plans for the campground's water source and sewage disposal system before a license may be granted by the board of health (310 CMR 14.21).

* 310 CMR 14.27 provides for a two-year grace period from the effective date of May 1, 1980, for operations of all family type campgrounds licensed and in existence as of May 1, 1980 to bring their facilities into compliance with new requirements. Such facilities must, until May 1, 1982, at least be in compliance with the previous set of "Minimum Standards for Developed Family Type Campgrounds, Article VIII of the State Sanitary Code," 310 CMR 18.00.

RATIONALE

Family-type campgrounds permit the Commonwealth of Massachusetts to share with visitors from other states and nations our heritage, without offending our guests with bad water and unsanitary human support facilities. We also need to avoid burdensome impact upon the camp environment by overcrowding with people and vehicles and by overflowing garbage and rubbish. For our generosity as community hosts, we also share our tax burden through improved property tax assessments on the camp enterprise, and other taxes incidental to the needs of visitors and their vehicles.

More important than esthetic and economic rationale is the control of communicable diseases and the control of unpleasantness (nuisances). In 1978, 32 outbreaks of acute waterborne diseases involving 11,435 cases were reported to the Center for Disease Control, U.S. Public Health Service — this was the highest number of cases since the current surveillance system was initiated. The majority of outbreaks involved semipublic water supplies, that is, systems in institutions, camps, and parks, that can be used by the general public. This report provides ample rationale for regulations concerning water supply, sewage disposal, and holding tank dumping stations.

Site selection and development should facilitate control of mosquitoes and biting flies in order to minimize insect-borne nuisances and diseases (Reg. 14.02). Sanitary maintenance — use of suitable washing agents and chlorine rinses of 0.05 percent available chlorine — reduces transmission of bacterial and mycotic skin diseases. Sanitary-design dumping stations for chemically-stabilized human excreta protect the camping population from fecal-borne diseases and the propagation of flies attracted by feces. Finally, effective screening of toilet facilities is very important. Flies attracted to and soiled by fresh human excreta are also attracted to exposed ready-to-eat foods, and thus the “fecal-oral” route of disease transmission occurs. The camp operator in concert with the board of health and the Department of Environmental Quality Engineering can prevent this unpleasant ending.

DEFINITIONS

FAMILY TYPE CAMPGROUND means a tract or parcel of land, either privately or publicly owned, used wholly or in part for recreational camping or group activity purposes or for accommodations for overnight or longer periods, and which accommodates for profit or under philanthropic or charitable auspices three or more families or camping groups. The family-type campground may accommodate tents, motor homes, expandable camping units, and such other devices as may be developed and marketed for the camping trade. The term family-type campground does **not** include a children's day camp, recreational camp for children, mobile home park or picnic area.

SAFARI FIELD means an area attached to a licensed family type campground used for overflow and group camping.

CAMPING UNIT means any vehicle or object on wheels which is so designed and constructed, or reconstructed or added to by means of accessories, as to permit the vehicle to travel over the highways, and as to permit the use thereof for camping purposes, including, without limiting the generality of the foregoing, travel trailers, self-powered camping units, expandable camping units and similar camping devices.

SELF-CONTAINED UNIT means a travel trailer or motor home equipped with holding tanks for black water and gray waste water so that a hookup to the camp sewer system is not required. The holding tank must be periodically pumped or drained to the camp facility.

BLACK WATER means sewage from toilet wastes only.

GRAY WATER means sewage consisting of wash water from sink or shower.

OPERATOR means any person, corporation, firm, partnership or political subdivision who alone or jointly or severally with others owns a family-type camp, or has care, charge, or control of a family-type camp as agent or lessee of the owner or as an independent contractor.

PART G: BATHING BEACHES

BOARD OF HEALTH RESPONSIBILITIES

1. **Prohibit** bathing and swimming at any beach where the quality of bathing water does not meet the standards for physical quality and bacteriological quality established by the Minimum Standards for Bathing Beaches, 310 CMR 17.10 (B) and (C).
 - a. To meet the standards for physical quality, the water must be free of sludge deposits, solid refuse, floating waste solids, oils, grease, scum, and hazardous substances deemed to be of public health significance, and the water must be clear enough during normal usage so that a black disc, six inches in diameter, on a white field, is readily visible from the surface when placed at a depth of four feet, or on the bottom where the depth is less than four feet.
 - b. Bacteriological quality may be determined by DEQE; epidemiological evidence of prevalence of infectious disease considered to be related to the use of bathing beach water, and/or sanitary survey conducted by the board of health, MDPH or DEQE are other factors to be considered.
2. **Consider and act upon application** for permit to locate, construct, develop or alter the accredited bathing beach. The board must review the following plans, specification and information:
 - a. Proposed site of bathing beach
 - b. Sanitary survey
 - c. General layout and dimensions of bathhouses, toilet, sink and shower facilities, drinking fountains, food service facilities, lifeguard duty areas, floats, towers, piers, and markers
 - d. Depth of water and location of eddies and pools
 - e. Presence and nature of currents or sunken rocks
 - f. Estimated average daily patronage and methods of estimating used
 - g. Construction and location of proposed disposal facilities for sewage and wastewater
 - h. Well location and construction if public water supply is not available
 - i. Proposed operation and maintenance procedures
 - j. Proposed supervisory personnel, lifeguards, safety equipment
 - k. Proposed procedure for disposal of rubbish and garbage.
3. **Approve any changes** in an approved application, plan, specification or information regarding development of an accredited bathing beach that shall be submitted to the board of health (310 CMR 17.16).
4. **Consider and act upon any application** for license to operate an **accredited** bathing beach, i.e., a public or semi-public bathing beach or portion thereof which complies with the Minimum Standards for Bathing Beaches, 310 CMR 17.00 (Article VII of the Sanitary Code, to be revised as Title 3 of the Environmental Code with reserved CMR designation 310 CMR 13.00).
5. **Inspect all accredited bathing beaches** at least twice during the swimming season to determine compliance with the state's minimum standards (310 CMR 17.16).

If violations are found, order corrections and/or revoke or suspend the license to operate, as necessary (310 CMR 17.17). Refer to regulations for procedures to follow.
6. **Take and test water samples** in accordance with recommended procedures or ensure that DEQE or other qualified personnel take samples at times and places that the board should designate (310 CMR 17.10).
 - a. At accredited bathing beaches, water samples should be taken at least twice monthly, preferably weekly, during the bathing season, and before the opening of the bathing beach.

- b. The cost of collection and testing may be directly borne by the operators, or indirectly through license fees.
 - c. Request assistance or advice from DEQE if necessary regarding proper procedure for water sampling.
7. **Ensure that any fixed or mobile food service establishment** on any bathing beach is operated in accordance with Article X of the Sanitary Code, 105 CMR 595 (see Ch. 15 of this Guide, Food Purity and Quality).

RECOMMENDED BOARD OF HEALTH ACTIVITIES

Meet regularly with operators of bathing beaches to review safety and sanitation criteria and water testing requirements.

STATE RESPONSIBILITIES (MDPH and DEQE)

1. MDPH must determine the equivalence of American Red Cross advanced training in first aid. This applies to 310 CMR 17.5, which states that during hours of operation there must be a person trained in first aid at the bathing beach.
2. DEQE must certify laboratories that make water analyses.
3. DEQE may:
 - a. take water samples
 - b. determine that water is polluted and may constitute a menace to health if used for bathing.
4. DEQE should cooperate with boards of health regarding the recommended board of health activities listed above.
5. DEQE must inspect state-operated accredited public bathing beaches.

RATIONALE

The regulations governing the operation of bathing beaches are designed to protect the public from a wide variety of health problems such as accidents, waterborne disease, and contaminated food from food service establishments, and to ensure proper facilities for rubbish and sewage disposal, drinking water, and emergency medical care. If the board of health issues a license for an accredited bathing beach, it indicates to the public that the beach is a supervised, sanitary place for bathing and swimming. Public and semi-public bathing beaches that are not accredited are assumed by the public to have water of acceptable quality for swimming, unless they are well posted with warnings of unsafe or polluted water. It is incumbent upon boards of health to provide adequate posting and warnings in newspapers, notice to police, selectmen, and other public officials of any beaches where the water is not fit for swimming.

A list of objectives of public health involvement in the operation of bathing beaches:

1. To reduce the risk of beach-crowd injuries from broken glass, other sharp and foreign objects.
2. To reduce the risk of injuries from use of structures, bathhouses, and floats.
3. To reduce the risk of drowning due to inadequate supervision and murky or turbulent waters.
4. To reduce the swimming risks associated with sub-water-surface holes, rocks, and aquatic weeds.
5. To reduce the risk of communicable disease transmission by limiting or denying the use of facilities to persons with symptoms of disease.
6. To reduce the risk of communicable disease transmission by insects, unsafe drinking water, contaminated foods, and by contaminated towels, bathing suits, or bathhouse facilities.

7. To increase public confidence through annual improvements of the natural beach areas and/or man-made facilities for health benefits to clientele and economic benefits to host towns.
8. To analyze reported injuries and illnesses, and to highlight the highest risks, by site and type, in the annual operational experiences of licensed beaches.
9. To meet annually or periodically with operators to focus on ways and means to reduce the "highest risk" items.

DEFINITIONS

1. **Bathing Beach** shall mean a natural or artificial flowing or impounded pond, lake, stream, river or other body of fresh or salt water at the location where it is used for bathing and swimming purposes together with buildings, equipment, and appurtenances, if any, and the land areas used in connection therewith. It shall not mean a swimming pool as defined in Article VI of the Sanitary Code (310 CMR 16.00).
2. **Public Bathing Beach** shall mean a bathing beach to which admission may be gained by the public with or without the payment of a fee.
3. **Semi-Public Beach** shall mean a bathing beach on the premises of, or used in connection with, a hotel, motel, trailer court, apartment house, housing development, country club, youth club, school, camp, or similar establishment where the primary purpose of the establishment is not the operation of the bathing facilities, and where admission to the use of the beach is included in the fee or consideration paid or given for the primary use of the premises. Semi-public beach shall also mean a beach constructed or maintained by groups for members and guests only.
4. **Accredited Bathing Beach** shall mean a public bathing beach or portion thereof or semi-public bathing beach or portion thereof which complies with Article VII of the State Sanitary Code and is licensed as an accredited bathing beach by the board of health.
5. **Private Bathing Beach** shall mean a bathing beach established and maintained for the use of the owner or personal guests of his household, and is not subject to the provisions of 310 CMR 17.00.
6. **Operator** shall mean any person who alone or jointly or severally with others owns an accredited bathing beach regulated by this article or has care, charge, or control of such bathing beach as agent or lessee of the owner or as an independent contractor.

Note: Public or semi-public bathing beaches which do not meet the requirements for accreditation may still operate, but they may not be considered "accredited" bathing beaches. **All** public and semi-public bathing beaches, whether accredited or not, must comply with regulations 10.1 through 10.3, which deal with the quality of the bathing beach water.

PART H: SWIMMING POOLS

BOARD OF HEALTH RESPONSIBILITIES

1. **Inspect** every public or semi-public wading and swimming pool, and issue annually a permit for its use if it is in compliance with Article VI of the Sanitary Code, "Minimum Standards for Swimming Pools," 310 CMR 16 (may be revised to Title 2 of the Environmental Code, 310 CMR 12). DEQE inspectors from regional office may be requested to assist in inspection.
 - a. If the pool is new or recently remodeled, check items approved on the construction plan (sewage disposal works, bather load, structure, construction, inlets and outlets, cross connections, skimmers, dimensions, walkways and ladders).

- b. On regular inspections, check water quality, water testing methods, safety and supervision, capacity compared with bather load, sanitary conditions of bathhouses, and other items specified on the standard inspection form and in Article VI of the Sanitary Code.
- c. The **permit** for operation of a pool expires on December 31 of the year issued and may be revoked by the board of health for violation of the Code at any time (Article VI, 310 CMR 16.10[C]). The operator must post the permit in a conspicuous location near the pool.

Renewal: application for renewal of a permit should be made 15 days before expiration of the old permit, or at least 15 days before the opening of the swimming pool.

2. **Review and act upon any application** to construct or remodel a public or semi-public swimming pool (see definitions below). Approve **in writing** any plans and specifications for constructing a swimming pool, or making changes in an existing pool which may affect compliance with the provisions of Article VI. The application shall be made on a form prescribed by the Commissioner of DEQE (310 CMR 16.02[A]).

If there is to be any change in the original plans which were approved by the board of health, and if these changes may affect the health and safety features of the pool, they shall be submitted to the board of health for review. * **Approval** in writing by the board of health must be obtained before any changes are initiated (310 CMR 16.02[B]).

3. **Receive notification** when a newly constructed, expanded, or remodeled swimming or wading pool is ready for use. This notification shall be given at least a week prior to completion of the project, so that a date can be arranged for a final inspection (310 CMR 16.02[E]).
4. **Cause water samples to be taken** for bacteriological analysis whenever the board deems it necessary. The bacteriological quality must meet the standards for drinking water set by the U.S. Public Health Service. The board may take the samples itself or require the operator to do it (310 CMR 16.26[A]).
5. **Enforce** Minimum Standards for Swimming Pools (310 CMR 16.00).
 - a. The provisions of Title 1 of the State Environmental Code govern the procedures for issuing orders, holding hearings, providing for appeal, and granting variances.
 - b. Under Article VI, orders of compliance may be issued whenever a swimming pool does not comply with the Article's provisions.
 - c. If upon inspection any health or safety hazard is revealed, the board of health may issue an order which revokes or suspends a permit to operate. In this case, no one will be allowed to enter the pool until the hazard has been corrected and the board of health has re-issued the permit, or the order has been revoked in writing.

RECOMMENDED BOARD OF HEALTH ACTIVITIES

1. The board of health should conduct annual reviews with swimming pool operators concerning:
 - a. the health regulations (310 CMR 16.03)
 - b. training and assignment of lifeguards (310 CMR 16.04)
 - c. safety equipment (310 CMR 16.05)
 - d. first aid equipment (310 CMR 16.06)
 - e. bathhouse and sanitary facilities (310 CMR 16.07).
2. The board should inspect the written records the operator is required to keep on all data pertaining to the operation and condition of the pool. These records must include:
 - a. daily attendance
 - b. amounts and types of chemicals used daily

* See note in appendix describing re-codification procedures. Article VI regulations had not been revised as of July 1, 1980, but have been renumbered in the CMR format so that former regulation 10.2 now is numbered 310 CMR 16.10(B).

- c. results of chemical and bacteriological tests
 - d. dates and times of emptying and cleaning pool and backwashing filters
 - e. daily hours of operation of the purification equipment (310 CMR 16.10(E)).
3. The board may approve any filtration system or filtration rate other than that described in 310 CMR 16.13 as long as DEQE also approves.
 4. The board may make exceptions to 310 CMR 16.18(A) concerning minimum water depths for pools used primarily for instruction, or in a recessed area of a pool which is of an irregular shape, such as the leg of a T, L or Z-shaped pool.
 5. The board may require that tests for pH and residual disinfectant be made more often than daily (310 CMR 16.25(B,C)).

STATE RESPONSIBILITIES (DEQE)

1. In order for an operator of a swimming pool to use a filtration system or filtration site other than that prescribed in 310 CMR 16.13, written approval must be obtained from DEQE and also from the board of health.
2. If a disinfectant other than chlorine is to be used, approval must be given by DEQE (310 CMR 16.25(A)).
3. DEQE should assist the board of health on request or as necessary in making swimming pool inspections.

RATIONALE

Public health problems associated with swimming pools fall into two major areas: accidents (mainly falls and drownings) and gastrointestinal diseases transmitted through the water. Eye, ear, respiratory and skin disorders may also result from the use of swimming pools.

Each person who enters a swimming pool also carries a variety of personal and environmental bacteria into the pool water. Some of these are disease-causing bacteria. The relative numbers of bacteria from each person depends partly on how thoroughly the person shower-cleanses: if he/she skips through the shower, there may be two to ten times more bacteria than if he/she washes thoroughly with soap and warm water and follows with a thorough rinse.

Clear swimming pool water containing "free residual chlorine" (or disinfectant of equivalent efficacy) at the correct pH kills the personal inputs of bacteria, particularly the common non-spore forming disease bacteria **provided** the cumulative inputs are not overwhelming **and provided** the cumulative inputs of organic matter — dense sputum, feces, filter scum — do not reduce water clarity

Plans notwithstanding, the water quality and safety of the swimming pool depend mostly on the attitude, knowledge and ability of the operator. S/he is responsible daily for the bacteriological, chemical, and clarity qualities of the water. S/he must know how to clean or process the water to maintain standards. The owner/operator is required, on his or her own initiative, to close the pool at any time the pool water does not conform with the requirements for residual chlorine and water quality.

DEFINITIONS

The first administrative challenge to the board of health is to discern which swimming pools in its municipality are subject to its purview according to Article VI. The defined terms that the board of health is primarily concerned with are **public swimming pools** and **public wading pools**. These are defined:

Swimming Pool means and includes every artificial pool of water having a depth of two feet or more at any point and used for swimming or bathing, located indoors or outdoors, together with the bathhouse, equipment, and appurtenances used in connection with the pool. It does not include any residential pool as herein defined nor does it include any pool used primarily for baptismal purposes or the healing arts.

Wading Pool means a pool of water in a basin having a maximum depth of less than two feet intended chiefly as a wading place for children. It does not include any residential pool as herein defined.

Public Pool means every swimming or wading pool to which admission may be gained by the general public with or without the payment of a fee.

Semi-Public Pool means a swimming or wading pool on the premises of, or used in connection with, a hotel, motel, trailer court, apartment house, country club, youth club, school camp, or similar establishment where the primary purpose of the establishment is not the operation of the swimming facilities, and where admission to the use of the pool is included in the fee or consideration paid or given for the primary use of the premises. Semi-public pool shall also mean a pool constructed and maintained by groups for the purposes of providing bathing facilities for members and guests only.

Operator means any person who alone or jointly or severally with others owns a public or semi-public swimming pool or wading pool regulated by this article, or has care, charge or control of such a pool as agent or lessee of the owner or as an independent contractor.

PART I: MESSAGE PARLORS AND BATHS

BOARD OF HEALTH RESPONSIBILITIES AND AUTHORITY (M.G.L. 140:51)

1. **Grant licenses** for person(s) to practice massage or operate an establishment for the giving of vapor, pool, shower or other types of baths upon such terms and conditions and under rules and regulations as it deems proper.
 - a. A registered or apprentice barber, or hairdresser or student hairdresser may practice facial and scalp massage without a special license.
 - b. A person licensed to practice massage or operate a bath establishment may, at the request of a physician, attend to patients in any of the towns in Massachusetts without obtaining an additional license.
2. **Revoke** any such license for such cause as it deems sufficient. This may be done without a hearing.
3. **Adopt local rules, regulations, and licensing requirements** as the board deems necessary for massage and bath operations.

PART J: PUBLIC LODGING HOUSES

BOARD OF HEALTH RESPONSIBILITIES

Inspect a public lodging house (defined as a building not licensed as an inn, in cities of over 50,000 people, in which at least 10 people are lodged free of charge or for no more than 25¢ a day) before a license can be granted by the licensing body.

- a. Inspect the house to determine adequacy of toilet facilities and sufficiency of ventilation (M.G.L. 140:36).
- b. Require as necessary that the licensee thoroughly clean and disinfect all parts of the building and the toilets and furniture within the building (M.G.L. 140:36).

CHAPTER 16.

CHAPTER 16. Inspection of Public Areas

- Introduction
- School Facilities and Health Services
- Day Care Facilities for Children
- Long-Term Care Facilities
- Recreational Camps for Children
- Farm Labor Camps
- Family-type Campgrounds
- Bathing Beaches
- Swimming Pools
- Massage Parlors and Public Baths
- Public Lodging Houses

CHAPTER 17

ANIMAL AND INSECT CONTROL

PART A: RODENT CONTROL

BOARD OF HEALTH RESPONSIBILITIES

1. **Inspect** areas for potential rodent infestation at regular intervals and on complaint, as provided by state and local regulations.
2. **Issue orders** of compliance, revoke licenses and permits (where applicable) and invoke fines for violations of regulations pertaining to rodent control, as provided by the following and other applicable state and local regulations:

105 CMR 410.550, Chapter II, Minimum Standards of Fitness for Human Habitation

105 CMR 420.430, Housing and Sanitation Standards for Farm Labor Camps

105 CMR 430.000, Sanitation Standards for Recreational Camps for Children

310 CMR 17.13, Minimum Standards for Bathing Beaches

105 CMR 595.000 (Article X), Minimum Sanitation Standards for Food Service Establishments

105 CMR 590.000, Rules and Regulations Relative to Retail Food Establishments

310 CMR 19.20, Regulations for the Disposal of Solid Wastes by Sanitary Landfill

310 CMR 18.17, Regulations for Installation, Operation and Maintenance of Solid Waste Transfer Stations.

3. **Require immediate action** to abate all conditions that create a potential or actual hazard due to rodent infestation (105 CMR 400.200 and 310 CMR 11.04).

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. Promote rodent control programs to prevent the infestation by rodents and the subsequent spreading of disease (see below).
2. Adopt regulations that require the practice of safe and effective rodent control methods (M.G.L. 111:31).

STATE RESPONSIBILITIES (MDPH and DEQE)

1. All farm labor camps shall be inspected annually by the Mass. Dept. of Public Health, or by the board of health if MDPH delegates the responsibility. Included in the inspection is a determination of whether there is a rodent problem at the camp (105 CMR 420.430 State Sanitary Code, Housing and Sanitation Standards for Farm Labor Camps).
2. A district health officer shall examine police station houses, lockups, jails, houses of correction, prisons and reformatories to ascertain their sanitary condition (M.G.L. 111:20, 21).

3. An officer of the regional office of MDPH should be available to monitor and provide assistance to local boards of health in the inspection of housing. An inspection may be made by a district health officer upon request.
4. DEQE may require routine programs for the control and elimination of rodents at the sanitary landfill or transfer station site (M.G.L. 111:150A).

RATIONALE

Rats spread a variety of diseases. These include ratbite fever in infants, leptospirosis (spread by rat urine) and, occasionally, typhus and plague (caused by rat fleas). Rat feces in food may cause salmonellosis.

Public health agencies have long fought infestation by rats and mice through rodent control programs. With the aid of sanitarians or certified pest control operators, rat harborages are located and owners of affected properties identified. The board of health sends a written notice to the owner or occupant of a dwelling requesting abatement and offers professional guidance for long-term preventive alterations to structures. If the owner fails to cooperate, a legal order follows. Follow-up inspections and surveys are needed to ensure that no rats have returned to the dwelling.

The board of health should encourage systematic collection of solid wastes throughout the community and should require sanitary disposal sites and procedures in cooperation with DEQE and MDPH. These services to households, apartment complexes, commercial and industrial enterprises deny food and shelter to rats and mice. Preventive measures reduce property damage from fires, reduce contamination of food by rats, and prevent rat-borne diseases to domestic animals and to people.

SUGGESTIONS FOR RAT CONTROL

1. Ratproofing

Ratproofing or vent stoppage consists of changing structural details to prevent entry of rodents into buildings. Openings as small as a half inch will admit young rats. Where only Norway rats are encountered, such openings as ground floor windows, sidewalk gratings, basement vents, utility pipe openings, and foundation walls are normally ratproofed; but where roof rats are found, ratproofing must also include wires, vertical pipes, and openings to upper floors and roofs. Where only Norway rats are encountered, in order to be economically feasible, the stoppage is confined to the more likely points of entry and not to every possible entrance.

Detailed information on how to ratproof buildings may be obtained by contacting the sanitarian in the Regional Office of MDPH.

2. Deny rodents a food source

- a. Feed your dog or cat only what it will eat; remove any uneaten food. Birds should be fed only by properly located bird feeders of four feet minimum height. Remove excessive amounts of dog feces. Since dogs only assimilate 30 to 50 percent of their food, their droppings can and do provide a food source for rodents.
- b. Remove and properly dispose of any fallen vegetables and fruit from your garden area.
- c. The ground floor near compost piles should be clear of weed growths; any organic matter added to the pile should be immediately turned under: the pile itself should be turned twice a week in the warmer months to maintain proper aerobic and moisture conditions.
- d. Plastic garbage bags, if used, should be placed in metal containers with tight-fitting lids until the time of collection.
- e. All harvested fruits and vegetables should be stored in rodent-proof containers 18 inches above the ground prior to use.

3. **Eliminate harborage areas**

- a. Place all dog houses a minimum of 12 inches, and firewood a minimum of 18 inches, above the ground; keep weed growth around them to a minimum. This proper storage of firewood will not only discourage rodent harborage, but also keep the wood sufficiently dry to deter termite or wood beetle infestations.
- b. All sheds and other utility buildings should be constructed with a full rat-proof foundation or with a floor on piers at least 18 inches above the ground.
- c. Any vegetative growth around above-ground pools and filter or equipment sheds should be cut as close to the ground as possible to discourage rodents from burrowing under them.
- d. Remove any rubbish, junk appliances, piles of lumber, brush or other unnecessary articles from the yard.

4. **Rat control in Sanitary Landfill sites**

The sanitary landfill method of refuse disposal can be operated so that conditions favorable to rat production do not develop. At a properly operated sanitary landfill, garbage and rubbish are compacted and covered with earth daily. This eliminates food and harborage for rats. If the proper procedures are not followed, a rat problem will probably develop.

If a rat problem does develop, the rats must be eliminated first, then food sources and harborage removed. Extermination can be achieved by contracting with a certified extermination service, or by an employee of the municipality, but in either case, the application of pesticides shall be made only by a pesticide operator licensed by the Mass. Pesticide Board. Permanent exclusion of rats can be achieved only by the proper compaction and coverage procedures at the sanitary landfill.

PART B: INSECT CONTROL

BOARD OF HEALTH RESPONSIBILITIES

1. **Inspect** areas of potential insect infestation (i.e., housing, farm labor camps, recreational camps, bathing beaches, food service establishments, retail food establishments, and sanitary landfill sites) at regular intervals and upon complaint, as provided by state and local regulation.
2. **Issue orders of compliance**, revoke licenses and permits (where applicable) and invoke fines for violations of regulations pertaining to insect control:

105 CMR 410.550, Chapter II of the Sanitary Code, Minimum Standards of Fitness for Human Habitation

105 CMR 420.431, Chapter III of the Sanitary Code, Housing and Sanitation Standards for Farm Labor Camps

105 CMR 430.000, Chapter IV of the Sanitary Code, Sanitation Standards for Recreational Camps for Children

310 CMR 17.13, Minimum Standards for Bathing Beaches

105 CMR 595.000, Article X of the Sanitary Code, Minimum Sanitation Standards for Food Service Establishments

105 CMR 590.000, Rules and Regulations Relative to Retail Food Establishments

310 CMR 19.20, Regulations for the Disposal of Solid Wastes by Sanitary Landfill

310 CMR 18.17, Regulations for Installation, Operation and Maintenance of Solid Waste Transfer Stations.

3. **Require immediate action** to abate all conditions which create a potential or actual hazard due to insect infestation (105 CMR 400.200, Chapter I of the Sanitary Code, and 310 CMR 11.04, Title 1 of the Environmental Code).
4. **Adopt regulations** that require the practice of safe and effective insect control methods (M.G.L. 111:31).
5. If the board of health determines that an area is infested with mosquitoes, it may declare the area to be a public nuisance, and serve an order upon the owner or occupant of the area. The board should advise the owner or occupant on how to abate the nuisance (see section below on methods of control) and set a time limit for the abatement.

RATIONALE

There are various ways in which insects affect the health of humans. They can transmit the agents of disease, invade the body's tissues, inoculate poisonous substances, or just be pests.

The control of insects is called for as part of the sanitary evaluation programs in various chapters of the Sanitary Code. These chapters require the control of insect populations in housing, food service and processing establishments, camps, and waste disposal areas.

To control insects, it is recommended that the board of health keep records of complaints, including the numbers received and where they come from. When a complaint is received, an investigation is required to gather the facts and to determine the source of the excessive insect generation. As an example, an unhealthy number of house flies may be traced to the faulty manure storage practices of a poultry farm or horse stable. If the evidence is adequate, an order to abate this nuisance is appropriate.

MOSQUITO CONTROL: SPECIAL TOPICS

1. Programs

Areas of poor drainage, in which intermittent surface waters may accumulate, are prime areas for mosquito breeding. If this situation is found near a residential neighborhood, the problem may become serious.

If a number of contiguous landowners are responsible for mosquito-breeding areas, a committee including representatives of the board of health, Department of Public Works, Planning and Zoning Board, and residents of the affected areas may be formed to decide how to deal with the problem.

If mosquito-breeding is caused by negligence, i.e., development, dumping, sewage, etc., the board of health can serve an order to abate a nuisance at the expense of the violator (see "Nuisances and Noisome Trades" Chapter 18). The board of health may advise the landowner how to abate the problem, such as through improvement of the drainage system.

If the person(s) refuse(s) or neglect(s) to abate the nuisance, the board of health may enter the area and eradicate the mosquitoes itself (M.G.L. 252:5B).

Chapter 40, Section 5, Clauses 36 and 50 of the General Laws provide for a city or town to tax itself in order to fund a mosquito control program:

A town may at any town meeting appropriate money for the exercise of any of its corporate powers, including the following purposes:

(36) "For the improvement of lowlands and swamps and the eradication of mosquitoes under Chapter 252 or for the eradication of mosquitoes by the Board of Health in a town not then included within an area described by an identifying name for the purposes of Section 5A of said Chapter 252."

STATE RESPONSIBILITIES RE: MOSQUITO CONTROL

The State Reclamation Board, which serves within the Department of Food and Agriculture, is composed of one member from DEQE, one member from the Department of Food and Agriculture, and one member from the Department of Environmental Management. The Board is concerned with reclaiming wetlands, including meadows, swamps, marshes, beaches, and other lowlands, and is responsible for mosquito control in Massachusetts.

1. If the State Reclamation Board receives a petition from the citizens of a town indicating a desire to improve (reclaim) an area, including a general description of the area, the types of improvements to be accomplished, and the necessity or desirability of such improvements, the board must make an investigation and survey of the area.

The investigation and survey should determine the approximate boundaries of the area, the need for the proposed improvements, the probable benefit to the public health, the agricultural or other uses to which the land can be put and the value of the land for such uses after the improvements are made, and the general practicability and advisability of undertaking the proposed improvements (M.G.L. 252:5).

2. If the State Reclamation Board decides that the improvements should be made, it must first give public notice of the petition in the local newspaper and by registered mail to each owner or occupant of the land. Secondly, a hearing must be held within seven days of the publication of the notice.

After the hearing, if the Reclamation Board approves the proposed improvements, it will determine whether the organization of a reclamation district is necessary for constructing and maintaining the improvements (M.G.L. 252:5).

3. If the Board decides that a district mosquito control project should be formed, it shall appoint three, five, or seven district commissioners and authorize them to form and administer a district mosquito control project (M.G.L. 252:5).
4. The State Reclamation Board is also responsible for approving district greenhead fly control projects in the same manner (M.G.L. 252:24)
5. If the State Reclamation Board determines that the improvements should be made but that the formation of a district is not necessary, it shall appoint one or more commissioners who will be responsible for effecting the improvements (M.G.L. 252: 5A).

(50) "For the purpose of matching appropriation by the commonwealth for the control of the disease known as encephalitis such sums of money as may be required, but not more than five thousand dollars. Money so appropriated shall be expended under the direction of the state reclamation board."

If there is a mosquito problem in an area which includes a number of towns and cities, it may be advantageous for these communities to pool their resources. The State Reclamation Board may appoint District Mosquito Control Commissions to supervise such a project (M.G.L. 252:5).

A larger-scale program could prove to be a more effective and efficient means of mosquito control than an individual town-by-town effort. Experts can be employed for the project to plan a coordinated and ongoing mosquito control program for the whole area, thereby avoiding a duplication of expense.

Any mosquito control measure for a city or town which is **not** in an organized mosquito control district is a local problem and should be handled by the local board of health. However, any order to

abate a nuisance shall be in a form approved by the State Reclamation Board in accordance with Chapter 252, Section 5B of the General Laws.

State Reclamation Board
Dept. of Agriculture
100 Cambridge Street
Boston, Mass. 02202
(617) 727-3004

2. Methods of Mosquito Control

- a. **Water management/source reduction** — The most permanent but also the most expensive and time consuming method of controlling mosquito populations. This consists of manipulating water in a variety of ways so that it is not suitable for mosquito breeding. Once accomplished, this helps to eliminate the source of mosquitos and to reduce the use of insecticides in the long run.
- b. **Larvicide** — Controlling mosquito populations before biting populations mature and disperse. Mosquito larvae are confined to distinct and identifiable shallow bodies of water for several days to over a month. This fact allows the selective application of insecticide to the site of mosquito production.
- c. **Adulticide** — The use of low toxicity, nonpersistent insecticides to reduce biting mosquito populations. Adult mosquito control is necessary when adequate funding for manpower and machinery is unavailable to do the more expensive water management and larviciding methods.

RESOURCES AVAILABLE — MOSQUITO CONTROL

In utilizing any of the basic methods of abating mosquitoes, one must know the exact nature of the source and extent of mosquito breeding and the size of the area involved. Many variables must be taken into consideration before determining which method is best for a given situation. Technical advice of experts is essential in providing safe, effective, and economical mosquito control. Assistance can be obtained through the State Reclamation Board, the State Pesticide Board, the County Extension Service and the Entomology Department of the University of Massachusetts, Amherst.

Source: *1979 Insecticide Recommendations for Mosquito Control in Massachusetts by Regional Project and Municipal Programs* by Jere D. Downing.

This pamphlet (and a yearly up-dated version) may be obtained by contacting:

Extension Specialist
Dept. of Entomology
Fernald Hall
University of Massachusetts
Amherst, MA 01003

For more information about pesticides, see Chapter 9, Part B on Pesticides.

MASSACHUSETTS MOSQUITO CONTROL PROJECTS

Project	Telephone No.
BERKSHIRE COUNTY MOSQUITO CONTROL PROJECT Court House Pittsfield, MA 01201	(413) 442-1477
BRISTOL COUNTY MOSQUITO CONTROL PROJECT North Walker Street Taunton, MA 02780	(617) 823-5253
CAPE COD MOSQUITO CONTROL PROJECT 149 Falmouth Road Hyannis, MA 02601	(617) 775-1510
CENTRAL MASSACHUSETTS MOSQUITO CONTROL PROJECT 54 Hudson Street Northboro, MA 01532	(617) 393-3055
EAST MIDDLESEX MOSQUITO CONTROL PROJECT Sun Street Waltham, MA 02154	(617) 899-5730
ESSEX COUNTY MOSQUITO CONTROL PROJECT 266 Haverhill Street Rowley, MA 01969	(617) 948-2381
NORFOLK COUNTY MOSQUITO CONTROL PROJECT 34 Endicott Street Norwood, MA 02062	(617) 762-3681
PLYMOUTH COUNTY MOSQUITO CONTROL PROJECT Columbia Road Pembroke, MA 02359	(617) 826-8612
SOUTH SHORE MOSQUITO CONTROL PROJECT 1120 Hancock Street Quincy, MA 02169	(617) 773-9191
SUFFOLK COUNTY MOSQUITO CONTROL PROJECT 185 First Street South Boston, MA 02127	(617) 269-8018

PART C: ANIMAL BITES/RABIES

BOARD OF HEALTH RESPONSIBILITIES

1. **Report** all cases of animal bites to the MDPH Division of Communicable Disease Control. Most boards of health have pre-printed cards for this purpose. The Division may investigate bat bites or other bites of particular concern.
2. **Send animals**, or parts thereof, that had symptoms of rabies to the Massachusetts Diagnostic Laboratories, State Laboratory Institute.
3. **Provide antirabic treatment** (vaccine and serum administered by a physician of the person's choice, except in Boston) free of charge, upon application, to any residents exposed to rabid animals (M.G.L. 140:145A). The board must establish the rate of compensation for such treatment and may be eligible for full or partial reimbursement of such costs from the county in which the person was exposed to rabies (refer to 105 CMR 335.000, Treatment of Persons Exposed to Rabies).
4. **Ensure quarantine** of dogs or other domestic animals suspected of having bitten a person. Confine and observe for 10 days.
5. **Act upon any request** to declare a dog exempt from rabies inoculation requirement for licensing, if a veterinarian's certificate states that the inoculation is inadvisable because of an infirmity, other condition or regimen of therapy. The board's declaration should state the period of time the exemption will be in effect (M.G.L. 40:137).

RECOMMENDED BOARD OF HEALTH ACTIVITIES

1. Promote or sponsor annual rabies vaccination clinics, which are usually offered by practicing veterinarians in the area (refer to 105 CMR 330.000, Vaccination of Dogs against Rabies).
2. Promote education in the areas of avoiding animal bites and providing appropriate first aid and medical supervision when bites occur.
3. Encourage the appointment of a dog officer for the town. In the absence of a dog officer, the board of health may administer dog control for the town.

RESPONSIBILITIES OF THE DOG OFFICER

1. Investigate complaints regarding dogs and other pets and damage to livestock allegedly caused by dogs.
2. Apprehend stray dogs and keep them until owner is found or until dogs can be otherwise disposed of.
3. May inspect any kennel located within the town or city and may revoke or suspend the kennel's license if it is not being maintained in a sanitary manner or if records required by law are not properly kept (M.G.L. 140:137C).

RESPONSIBILITY OF THE TOWN CLERK

The town clerk is responsible for issuing dog licenses (M.G.L. 140:137). A license must not be issued until the dog has been inoculated with an approved rabies vaccine, unless the licensing official grants an exemption because the dog is less than six months old, the board of health has declared the dog exempt for the current period (see above), or the dog is in transit or in the state only for show or exhibition.

RATIONALE

Rabies (hydrophobia) is a usually fatal infectious viral disease that can affect almost all common warm-blooded animals. It is caused by a specific virus which attacks nerve tissue and then progresses to the brain. Three to five days before the symptoms appear, the virus is present in the saliva of the animal. The saliva remains the vehicle of infection throughout the course of the disease. People can get rabies in several ways. A bite wound is the most frequent. Less often, saliva from an infected animal may enter a scratch or cut. In rare cases, the virus may be inhaled, most often in caves where bat feces are present.

An examination of U.S. rabies statistics over the 10-year period, 1967–1977, shows a decrease in cases of rabies in dogs, cats, farm animals, and foxes, and an increase in the cases of rabies in skunks, bats, raccoons, and other wild animals.¹

Rabbits and the rodent family (rats, mice, squirrels), with the exception of bats, present virtually no risk of rabies in Massachusetts. The chances of contracting rabies from any of these animals is so small that unless such an animal has actively attacked and bitten a person without provocation, there should be no cause for concern. The primary vector of rabies for pet animals and humans in Massachusetts continues to be the insectivorous bat.

Wild animals can spread rabies to unvaccinated domestic animals and to people. Vaccinating domestic animals (especially dogs) serves to insulate the human community from wild animal reservoirs of rabies. It is very important to continue this practice. The occurrence of rabies in humans for the 1967–1977 period averaged only 1.8 cases per year. However, of the 18 cases that occurred in those 10 years, only two individuals survived.

Since dog bites constitute the most common cause for alarm, prevention of dog bites can greatly reduce the concern and the expense involved in quarantine of suspect dogs. Preventive measures include the following:

1. Teach children not to abuse or tease pets.
2. Avoid giving dogs to children under the age of six.
3. Do not intercede in dog fights.
4. Avoid holding your face close to an excited animal.
5. Exercise extreme caution when assisting injured and sick animals.
6. Avoid abruptly arousing sleeping dogs.
7. Be careful in picking up puppies so as not to offend the mother dog.

LAWS REGULATING RABIES/DOG LICENSING

1. The owner or keeper of any dog **three months** of age or older **must** have it licensed. Licensure period is April 1st through March 31st every year. Forms and tags for licensure shall be supplied by county office (M.G.L. 140:137).
2. Every license issued to the owner of a dog shall have a description of the symptoms of rabies printed on it (M.G.L. 140:145).
3. The owner or keeper of any dog six months of age or older must have the dog vaccinated against rabies by a licensed veterinarian using a vaccine approved by MDPH. Unvaccinated dogs acquired or brought into Massachusetts must be vaccinated within 30 days of entry or upon reaching six months of age. (M.G.L. 140:145B).

Rules and Regulations Relative to the Vaccination of Dogs Against Rabies (M.G.L. 140:145B; 105 CMR 330.000) include the following:

- a. Dogs shall be vaccinated with either killed or modified live virus vaccine. Vaccine of caprine (goat) origin shall not be acceptable.

- b. A rabies tag of size, shape, and color approved by the Dept. of Public Health shall be provided by the vaccinating veterinarian for each dog vaccinated. Each such tag shall be inscribed with the words "Rabies Vaccinated" as well as the year, name, and address of the veterinarian or board of health, and identification number of the vaccinated dog. The rabies tag must be attached to the collar or harness of the dog and worn at all times in the same manner as the license tag.
 - c. A certificate of vaccination approved by MDPH must be completed in triplicate by the vaccinating veterinarian. The original copy shall be filed by the vaccinating veterinarian with the clerk of the city or town where the dog is licensed; one copy is to be provided to the owner of the dog, and one copy shall be retained by the vaccinating veterinarian.
 - d. Vaccinated dogs must be re-vaccinated at intervals not exceeding 24 months.
4. The board of health shall furnish free of charge to any resident who has been or may have been exposed to rabies (M.G.L. 140:145A):
- a. Antirabic vaccine and serum
 - b. Antirabic treatment (administration of vaccine) in accordance with rules and regulations of MDPH to any residents exposed to rabies.
 - c. Sources of serum and vaccine are:
 - i. Lederle Laboratories
1055 Commonwealth Avenue
Boston, MA 02215
(617) 782-6000
 - ii. Gilman Brothers, Inc.
20 Freeport Street
Dorchester, MA 02122
or
45 Arctic Street
Worcester, MA 01604
(617) 757-6301
5. The board of health shall establish rates of compensation for such treatment and shall be accordingly compensated from the dog fund of the county where the person was exposed to rabies (M.G.L. 140:145A). Compensation, limitations and exceptions:
- a. In Suffolk County, reimbursement shall be made by the city or town where the person was exposed to rabies.
 - b. Limit of \$50 per case.
 - c. Compensation shall not include part of the salary of the city or town physician.
 - d. Bites (exposures) by unlicensed dogs are not compensated.
 - e. Bites by other animals or wild animals are compensated.

The law does not specify sources of funds for vaccine and its administration to cases not compensated by county dog fund. It appears that the board of health must request local funds for this purpose.

PROTOCOL I

HANDLING AN ANIMAL BITE REPORT

1. You receive a call reporting that an animal has bitten someone.

Advise the person to wash the wound immediately with soap and water for a minimum of 30 minutes. This should be done at home if a doctor is not immediately available. In any case, a doctor should be seen as quickly as possible.
2. The victim goes to the doctor.

You immediately try to find the animal which bit the victim and determine the circumstances of the bite. Report all animal bites to the Division of Communicable Disease Control, MDPH.
3. Possibility I: You find the suspect animal alive.

Check for certification of rabies vaccination within the last two years.

 - a. The animal has been vaccinated.

The problem is solved. You inform the victim's doctor.
 - b. It is a domestic animal that has not been vaccinated, but appears healthy.

The animal is confined and observed for 10 days. Veterinary assistance is very desirable.

 - i. The animal develops signs of rabies.
(See Appendix II(17).

The animal should be killed without any damage to the head. The **entire head** or entire animal should be immediately placed in a double plastic bag, (double knotted) and refrigerated. It should be sent as quickly as possible by messenger or bus to the State Laboratory. (See Protocol II, below.) The victim's doctor must be informed of this.
 - ii. No signs of rabies appear.

The problem is solved. Advise the victim's doctor of this outcome. The local board of health, acting through the animal inspector or dog officer, must pronounce the animal safe to release.
 - c. The animal is a rabbit or rodent (other than bat) and was provoked.

The problem is solved. You inform the victim's doctor.
 - d. The animal found is an unwanted stray, or a wild animal which bit when **unprovoked**.

Signs of rabies in wild animals cannot be reliably interpreted. Therefore, any wild animal that bites or scratches a person should be killed at once (without unnecessary damage to the head) and sent to the State Laboratory for analysis.

4. Possibility II: The animal suspected is found dead.

You must arrange to bring the entire animal or the animal's head in a double plastic bag closed with a **double knot**, refrigerated, to the State Laboratory as soon as possible. Advise the victim's doctor of this outcome.

5. Possibility III: The suspect cannot be found.

Immediately advise the victim's doctor of this. Also call the State Health Department, Division of Communicable Diseases. (617) 727-2688 or (413) 549-1045 (or at night: [617] 727-2700.)

PROTOCOL II

SPECIMEN SHIPMENT AND RABIES IDENTIFICATION- DETAILED INFORMATION

A dog or cat suspected of being rabid should, if possible, be **captured, confined, and kept under observation for 10 days at home, in a veterinary hospital or dog pound**. This situation should be brought to the attention of the local board of health. The disease, if it develops during this period, should be allowed to progress. If no symptoms develop, the local board of health, acting through its animal inspector or dog officer, must pronounce the animal safe to release.

Bats and other wild animals should be killed humanely by appropriate means. Some of the ways commonly used are pentobarbital injection, gassing with ether or chloroform, or shooting through the heart. **Do not shoot through the head** or use chemical poisons such as strychnine or arsenic since such measures may render the specimen less useful for laboratory studies. **The Laboratory does not accept live animals**. Do not put brain tissue in formalin since test cannot be performed.

If the animal is small, such as a chipmunk, mouse or bat, bring or send **the entire dead animal**. **For larger animals, the intact head should be removed and sent to the laboratory**. Always identify the kind of animal being submitted and, for animals such as dogs, include the breed as well.

Shipment of Specimen

1. Wrap the head or gross specimen in several layers of newspaper, and enclose it securely in a plastic bag to prevent leaking of blood or tissue fluids.
2. Place it in a heavy carton with sufficient packing to prevent jarring of specimen.
3. Add two cans of pre-frozen "Cooler" in order to slow spoilage of the specimen. Seal and tie securely. **Do not use dry ice** as it may freeze the specimen and thereby delay examination. In addition, freezing and thawing often causes some distortion of the tissues, rendering the direct microscopic examination less useful.
4. Fasten a tag to the container and mark as follows: "**Rush - Perishable Material. Caution: Contains animal head for rabies examination.**" Also include or attach the "Form to Accompany Specimen for Rabies Examination."

Delivery of Specimen

The specimen should be delivered to the **State Laboratory Institute, 305 South Street, Jamaica Plain, 02130**. For those unfamiliar with the location of the laboratory — it is a large, eight-story building situated at the south end of Arnold Arboretum, two short blocks from the Forest Hills M.B.T.A. Station, and just up the South Street hill. A large sign at the driveway entrance reads: "COMMONWEALTH OF MASSACHUSETTS, STATE LABORATORY INSTITUTE, BIOLOGIC AND DIAGNOSTIC LABORATORIES."

Reporting On Specimen

Reports are made by the laboratory to the Division of Animal Health, Department of Agriculture, and to the Division of Communicable Diseases, Department of Public Health, who in turn issue reports to the individual attending physician(s), veterinarian(s) and board(s) of health, as may be indicated. An immediate report, based on direct microscopic examination of the tissues by the fluorescent antibody technique, is rendered approximately a day after receipt of the specimen. A delayed report, based on mouse inoculation studies, is given in 21 days.

For any unusual circumstances involving submission and examination of such specimens not covered by the above, please contact the Diagnostic Laboratories, (617) 522-3700, or the Division of Communicable Diseases, 727-2686 or (413) 549-1045, of the Massachusetts Department of Public Health. In the event that these numbers cannot be reached, MDPH maintains a round-the-clock emergency answering service which can be reached by calling (617) 727-2700.

PROTOCOL III

RABIES PREVENTION IN DOMESTIC ANIMALS

1. Stray, unowned or unlicensed animals should be removed from the community. Animal pounds should release dogs for adoption only after they have been vaccinated by a veterinarian.
2. Owned animals should be confined in an enclosed area or kept on a leash, unless under the supervision of the owner.
3. Dogs and cats bitten by a known rabid animal should be killed immediately. If the owner is unwilling to have this done, the exposed unvaccinated animal should be placed in strict isolation for six months. It should be vaccinated one month before being released. A dog that has been vaccinated, within three years with a U.S. licensed MLV type, or within one year with other vaccines, and subsequently exposed, should be revaccinated immediately and restrained (leashing and confinement) for at least 60 days but preferably 90 days.
4. All species of livestock are susceptible to rabies infection; cattle appear to be the most susceptible of all domestic animal species. Livestock known to have been bitten by rabid animals should be slaughtered immediately. If the owner is unwilling to have this done, the animal should be vaccinated and placed in strict confinement for six months.

See Appendix II(17) for: Bat Control.

PART D: LIVESTOCK INSPECTION/KEEPING OF ANIMALS

BOARD OF HEALTH RESPONSIBILITIES

1. **Nominate** (annually, in March) one or more inspectors of animals, provided that the town has accepted M.G.L. 129:15. Otherwise, the town or city manager, mayor or selectmen shall make the nomination, which must be submitted to the Director of the Division of Animal Health, Dept. of Food and Agriculture, for approval.
2. **Give written notice** of any known or suspected contagious disease among any domestic animals. Notice should be sent to the Director of Animal Health, Dept. of Food and Agriculture, or to the inspector for the town where the animal is kept. If a dairy animal is affected, the board shall notify the district health officer of MDPH (M.G.L. 129: 24,28).
3. **License stables** within its town or city (if population of town exceeds 5,000). In towns of less than 5,000 people, the board of selectmen license stables (M.G.L. 111:155 and 158).
4. **Make regulations or orders**, if necessary, for the keeping of animals relative to drainage, ventilation, size and character of stalls, bedding, the number of animals, and the storage and handling of manure in any stable in its city or town (M.G.L. 111:155).
5. **Grant written permission** to use a building for the slaughtering or rendering of animals (in towns of more than 5,000 people). This permission, if granted, must follow a public hearing (M.G.L. 111:151). If town is less than 5,000 people, this function is the responsibility of the board of selectmen.

ANIMAL INSPECTOR RESPONSIBILITIES

1. Inspectors shall make regular and thorough inspections of all neat cattle, sheep, and swine found within the limits of their town. They shall also, from time to time, make inspections of all other domestic animals if they know or have reason to believe that such animals are infected with or have been exposed to any contagious disease.

Such inspections shall be made at such times and in such manner as the Director of Animal Health, Dept. of Food and Agriculture, shall order (M.G.L. 129:19).
2. Inspectors shall examine the places in which neat cattle are kept, noting their situation, cleanliness, light, ventilation and water supply, and the general condition and cleanliness of the cattle, and shall make a detailed report with names and residences of owners to the director (M.G.L. 129:23).
3. If the inspector is satisfied upon completion of the inspection that the animals are free from contagious disease, s/he must give a signed, written certificate of their condition to the animals' owner or person in charge and shall record a copy of the certificate (M.G.L. 129:20).
4. If the inspector suspects that an animal has a contagious disease, s/he shall quarantine the animal for at least 10 days and take any other sanitary measures necessary to prevent the spread of the disease (M.G.L. 129:21).
 - a. When the inspector has caused an animal to be quarantined, s/he must deliver to the owner or person in charge a signed, written notice of the quarantine and shall enter a copy of the notice upon his records.
 - b. When the inspector has caused an animal to be quarantined, s/he must provide written notice and copy of the quarantine notice to the Director of Animal Health, Dept. of Food and Agriculture and shall give such information to no other person (M.G.L. 129:24).
5. The inspector must maintain a record of all of his/her inspections for two years, and must regularly submit this record to the Division of Animal Health (M.G.L. 129:24, 20, 21, 25) in accordance with rules prescribed by the director.

STATE RESPONSIBILITIES

Massachusetts Dept. of Public Health

1. Examine (in MDPH laboratories) materials from animals suspected of being infected with glanders, tuberculosis, rabies, or other diseases of domestic animals (M.G.L. 111:15).
2. Report unsanitary condition of barns, and all cases brought to its attention in which cattle, other ruminants or swine are kept in unsanitary conditions, to the Director of Animal Health, Dept. of Food and Agriculture (M.G.L. 111:16).

Massachusetts Dept. of Food and Agriculture (Division of Animal Health)

1. Director of Animal Health may make and enforce reasonable orders, rules and regulations relative to the following:
 - a. The sanitary condition of neat cattle, other ruminants and swine, and of the places where such animals are kept, the prevention, suppression and extirpation of contagious diseases of domestic animals, the establishing of disease-free herds of cattle, and the issuing of certificates in connection with such herds; the inspection, examination, quarantine, care of treatment or destruction of domestic animals affected with or exposed to contagious disease; the burial or other disposal of their carcasses, and the cleansing and disinfection of places where contagion exists or has existed (M.G.L. 129:2).
 - b. Copies of all orders, rules and regulations made by the Director are to be sent to each inspector in the town to which they apply (M.G.L. 129:5).
2. Every person engaging in the business of dealing in bovine animals (cattle) shall obtain a license from the Director of Animal Health, Dept. of Food and Agriculture (M.G.L. 129:39).

No person shall feed garbage to swine without first securing a permit from the Director of Animal Health (M.G.L. 129:14B).

Any person engaged in the business of operating a riding school or stable where horses are kept for hire shall obtain a license from the Commissioner of the Dept. of Food and Agriculture (M.G.L. 128:2B).

Every person engaged in the business of operating a pet shop shall obtain a license from the Director of Animal Health (M.G.L. 129:39A).

NON-GOVERNMENTAL AUTHORITY

Massachusetts Society for Prevention of Cruelty to Animals

The agents of the Massachusetts Society for Prevention of Cruelty to Animals may visit all places at which neat cattle, horses, mules, sheep, swine or other animals are delivered for transport, or are slaughtered, any pet shop where animals, birds, fish or reptiles are sold, or exhibited and any stable where horses are kept for hire, for the purpose of preventing, detecting and punishing violations of any laws (M.G.L. 129:9).

RATIONALE

Livestock inspections are performed to protect the immense economic resource that the livestock represents. If contagious disease is left to spread through the animal population, it can decimate this resource. Livestock inspection also ensures that animal disease will not infect the human population. Animals afflicted with certain diseases pose a very real threat to persons coming into contact with them.

Responsibilities appearing in this section are designed to protect the public from any health hazard arising from the improper keeping or slaughtering of animals. Other problems that may come to the attention of the board of health, such as malicious pets or large numbers of pets creating health hazards, may be subject to board of health action if they can be considered "nuisances." (Refer to M.G.L. 111:122-125A). Some towns have zoning regulations which limit the keeping of farm animals in residential areas. Pet shops are licensed, inspected, and regulated by the Division of Animal Health of the State Department of Food and Agriculture, so that problems regarding pet shops should be referred to that division.

If a pet shop or other animal-related business is believed to constitute a "noisome trade" or becomes a nuisance, the board of health may prohibit the business in places not assigned for such trade, as explained in M.G.L. 111:143.

CHAPTER 17.

CHAPTER 17. Animal and Insect Control

Animal Bites and Rabies Control
Rodents
Mosquitoes
Livestock

CHAPTER 18

NUISANCES AND NOISOME TRADES

BOARD OF HEALTH RESPONSIBILITIES

1. **Examine all nuisances**, sources of filth and causes of sickness which may be injurious to public health within the town or on vessels in the town's harbor (M.G.L. 111:122). Destroy, remove or prevent nuisances, as may be required.
2. **Cause nuisances to be abated** or removed: serve order in writing on the owner, occupant or agent, including deadline for abatement of the nuisance (M.G.L. 111:122, 123, 124, 125, 127B).
3. **Report to town clerk** abatement of a nuisance within 30 days (M.G.L. 111:139). (See section below, "Abatement of Nuisances.") Note: "Aquatic nuisance control" is regulated by DEQE, by authority of M.G.L. 111:5E, 5F.
4. **Assign sites for noisome trades**, which means trade or type of employment which may result in a nuisance or be harmful to the town's inhabitants or injurious to their estates, dangerous to the public health, or which, may be attended by unpleasant and/or injurious odors (see section below on Noisome Trades) (M.G.L. 111:143).
5. **Consider and act upon applications** for permits and licenses for noisome trades (M.G.L. 111:151), except in towns with fewer than 5,000 people, where board of selectmen is responsible.
6. **Make and enforce local regulations** as needed for the public health and safety (M.G.L. 111:31,31A,31B, 31C, 122, 127A, 128C, and other sections of the General Laws).

STATE RESPONSIBILITIES (MDPH and DEQE)

1. Advise the board of health upon request (M.G.L. 111:143).
2. Act on appeals of board of health decisions regarding sites for noisome trades (M.G.L. 111:143).
3. Respond to appeals from orders under M.G.L. 111:147.
4. If any local board of health fails after the lapse of a reasonable length of time to enforce the sanitary or environmental code, MDPH or DEQE (as appropriate) may in like manner enforce the code against any violator (M.G.L. 111:127A, 127B).

RATIONALE

Boards of health came into existence because of the need for local authority to regulate and abate public nuisances, sources of filth and causes of sickness. Long before the Massachusetts legislature adopted the main recommendations of the Shattuck Commission Report, establishing a state department of public health and requiring every municipality to establish a board of health (or recognize that the selectmen assumed board of health responsibilities), the city of Boston and several other cities and towns had established boards of health to try to cope with contagious diseases, including those brought by ships and their sailors, and with other problems of eighteenth-century cities: impure and inadequate water supplies, sewage disposal, drainage problems, putrid and contaminated meats and other foods, and public ignorance of the relationship of sanitation and personal hygiene to health.

Many of the current state and local public health regulations and laws constitute specific applications of the authority of boards of health to regulate and control nuisances. For example, the sanitary and environmental codes provide minimum standards for boards of health to apply in order to deal with common conditions, but boards retain authority to make other rules and regulations and to take action to abate nuisances outside the scope of state codes and regulations.

A wide variety of public health problems are considered nuisances: bad water supply, improper drainage and sewage disposal, demolished and abandoned buildings, improper handling of rubbish and garbage, and even obnoxious odors. "Noisome trades" refers to businesses or operations that may create nuisances or public health problems. Piggeries and other animal operations, refuse and garbage collection, and chemical plants are common examples of noisome trades. Though the State Departments of Public Health or Environmental Quality Engineering may be consulted, control of nuisances and noisome trades is a local responsibility.

As noted, many nuisances are regulated by the state sanitary and environmental codes, as authorized by the general laws (see sewage disposal, M.G.L. 111:126 and 127; water supply, M.G.L. 111:122A; housing, M.G.L. 111:127B; and farm labor camps, M.G.L. 111:128G). However, boards of health should realize that they may establish their own regulations as long as they do not conflict with the general laws and the sanitary or environmental codes. See chapter 2 above on procedures for making local regulations. One town's regulations for dumpster operations and garbage and rubbish disposal, and permit applications, are included in the appendices as an example of a town's efforts to create specific rules for a problem which is not adequately regulated elsewhere.

Many nuisances can best be prevented by regularly conducting inspections of homes, businesses, and land areas which might develop conditions leading to public health problems. If existing nuisances are abated promptly and effectively by board of health action, there is less chance that people will carelessly allow nuisances to develop on their property.

Some problems, however, may not be under the control of one town. Air and water pollution are classic examples of problems requiring regional cooperation and control. In some instances, cooperation among a few towns may be sufficient to deal with a problem; in other cases, a statewide, multi-state or even national approach is necessary. This may be the case in dealing with sources of acid rain and nuclear wastes.

I. NUISANCES (Regulated under M.G.L. 111:122-142 inclusive)

Who May Petition

Anyone who feels he is being "injured" by a nuisance may petition the board of health in writing for abatement of the nuisance. The petition must describe the premises where the nuisance is alleged to exist and state the nature of the nuisance (M.G.L. 111:133).

Inspection, Hearing and Orders

The board must view the premises and examine the nature and cause of the alleged nuisance (M.G.L. 111:133). If the board believes that the petition should be granted, it shall appoint a time and place for a hearing (M.G.L. 111:134). Failure of the board to act may invite the petitioner to proceed under M.G.L. 140 or 141 to call on the superior court or the county commissioners.

Written notice of the hearing must be given to the following people:

- the petitioner(s)
- those whose land it may be necessary to enter to abate the nuisance
- anyone else who may be damaged or benefited by the abatement
- the mayor or chairman of the Board of Selectmen.

The form of notice is described in M.G.L. 111:135.

Upon conclusion of the hearing, the board may cause the nuisance to be abated per M.G.L. 111:136 or may first order the person responsible for creating or permitting a nuisance to remove the nuisance within 24 hours, or whatever time it considers reasonable, at his/her own expense (M.G.L. 111:123).

1. The order must be in writing and may be served on the owner, occupant, or agent by a person appointed to serve civil processes, or a copy left at his usual place of abode, or else it may be sent by registered mail (M.G.L. 111:124).
2. If the owner (or person responsible) of the premises where the nuisance exists is unknown, or out of state, the order must be advertised in a local paper and posted at a conspicuous place on the premises (M.G.L. 111:124). The board shall then remove the nuisance per M.G.L. 111:125 or 136 and shall determine:
 - in what manner and at whose expense the improvements shall be kept in repair (if possible)
 - the amount of damage sustained and benefits accrued by anyone because of the improvement
 - the proportion of the expense of making and maintaining improvements that shall be borne by the town and by those benefitted (M.G.L. 111:136).

If the owner fails to comply with the order, and the board causes the nuisance to be removed, it may charge the expense to the owner, or person who caused or permitted the nuisance (M.G.L. 111:125).

The board is responsible for reporting all abatements of nuisances to the town clerk within 30 days after the abatement (M.G.L. 111:139).

Appeal

Anyone entitled to notice (listed above) who is aggrieved by the board's decision that a nuisance exists and must be abated may appeal to the superior court within seven days of notice of the decision. The appeal is made by filing a petition to the court that states the grievance and the action taken by the board of health (M.G.L. 111:137). The aggrieved person must give notice to the board of health within 24 hours after notice of its decision, of his intention to appeal to the superior court.

Anyone aggrieved by the board's neglect or refusal to cause abatement of a nuisance may petition the county commissioners, who may exercise all the powers of the board of health, and cause abatement of the nuisance (M.G.L. 111:141).

Anyone aggrieved by the board's refusal or neglect to act on a petition may apply to the superior court per M.G.L. 111:140.

II. NOISOME TRADES (Regulated under M.G.L. 111:143-154)

1. The board of health is responsible for assigning sites where "noisome trades" may take place. Noisome trades generally refer to a trade or type of employment which may result in a nuisance or be harmful to the town's inhabitants or their estates, or which may lead to unpleasant and/or injurious odors. Such businesses as piggeries, slaughterhouses, junkyards, refuse and garbage collection and chemical plants may fall into this category (M.G.L. 111:143).

According to a decision made in 1979, however, "odors and smells associated with ordinary farming activities" cannot be construed as a nuisance.

- a. Site assignments made by the board of health must be recorded with the town clerk (M.G.L. 111:143).
- b. Site assignments may be revoked by the board of health or by DEQE (M.G.L. 111:143), or by the superior court (M.G.L. 111:144).
- c. The board of health is responsible for assigning sites for sanitary landfill and other facilities for the disposal of solid and hazardous wastes (M.G.L. 111:150A). (See Chapter on Solid Waste Disposal.)

2. In addition to assigning sites for noisome trades, the board considers and acts upon applications for permits to operate noisome trades. Slaughterhouses and other noxious or offensive trades and occupations are regulated under M.G.L. 111:151. A public hearing is required before such a permit may be granted.
3. If the board of health revokes a permit or site assignment for a noisome trade, appeal of the order may be made to the superior court (M.G.L. 111:147).
 - a. If the order is affirmed by the court, the board shall recover costs for the town (M.G.L. 111:150).
 - b. If the order is annulled and the petitioner has not been given permission by the board of health to operate his/her trade pending and during the court proceedings, he/she may recover **damages** and **costs** from the town (M.G.L. 111:150).
 - c. If the petitioner was given permission by the board of health to operate during the court proceedings, and the order is annulled or altered, he/she shall not recover damages, and the court may render judgement as to whether costs may be recovered (M.G.L. 111:150).
4. In conformance with M.G.L. 111:31A, no one shall remove or transport garbage through a town in which it was collected without a permit issued by the board of health. No one shall transport garbage, offal or other offensive substances not collected in a town without registering with the board of health and conforming with its rules and regulations .

See Appendix II(18) for Sample Dumpster Regulations and Sample Permit Applications.

CHAPTER 18.

CHAPTER 18. Nuisances & Noisome Trades

Summary of Responsibilities

Rationale

Nuisances

Noisome Trades

CHAPTER 19

CEMETERIES AND BURIAL PERMITS

BOARD OF HEALTH RESPONSIBILITIES

1. **Issue burial permits**, including cremation or other disposition, after examination of certificate from attending physician, medical examiner, or other authoritative person (M.G.L. 114:46-48).
2. **Forward certificates** to the town or city clerk for death registration. If deceased is a veteran, inform the clerk and the veterans grave officer and cite this in the burial permit (M.G.L. 114:46A).
3. **Issue and/or receive permit** for transportation of any deceased person to another town or city; issue permit for exhuming, and for transport to another burial site (M.G.L. 114:46).

Essential information required for burial permits or removal and transportation permits, to be provided by the undertaker in the form of certificates or affidavits (M.G.L. 114:46):

- a. Name, age
 - b. Last known residence
 - c. Place of death; if at sea, name of vessel
 - d. Cause of death
 - e. Veteran status.
4. **License funeral directors annually**, May 1 st. (M.G.L. 114:49). Qualified candidates are certified by Mass. Board of Registration of Funeral Directors. Notify Mass. Board of Registration of Funeral Directors of licenses given.
 5. **Review and act upon** any proposal for location of a new cemetery or extension of old one, mausoleum, or crematory (M.G.L. 114:34, 35, 36).
 - a. Receive proposals, refer to DEQE. Arrange for public hearings as required.
 - b. When DEQE approval is received and all issues are resolved, approve in writing and forward to selectmen or mayor and aldermen.
 - c. Give notice and hearing as required by M.G.L. 114:34.

STATE RESPONSIBILITIES

DEQE

1. **Review and provide written approval** for use of any land for burial to ensure that no land is used for burial if it is so situated that surface water or ground drainage may enter any water used as a source of public water supply. Plan and description of the lands must be submitted to and approved in writing by DEQE (M.G.L. 114:35).
2. **Review and provide written approval** for erection of any community mausoleum whose crypts will be available to the public for burial purposes. Before construction of a mausoleum is started, detailed plans and specifications must be presented to DEQE for written approval (M.G.L. 114:43E).
3. **Supervise the erection** of any community mausoleum and enforce compliance with the approved plans and specifications. Modifications of the original plans and specifications must be approved by DEQE before they are implemented (M.G.L. 114:43F).

MDPH

1. **Order the owner** of any mausoleum or other structure containing one or more dead human bodies to remedy any situation involving the bodies which it deems a menace to the public health (M.G.L. 114:43I).
2. **Establish regulations** concerning the reception and cremation of deceased people who are to be cremated (M.G.L. 114:44). (See below and refer to 105 CMR 315.000.)
3. **Establish rules and regulations** for the burial and transport of person dead of any disease dangerous to the public health.

RATIONALE

Burial of the dead requires assured identification, authentic registration, reporting of veterans' deaths, sanitary embalming, protection of the public from dangerous diseases, protection of the public from odor and aesthetic nuisances, and performance of religious or formal interment services in accordance with the faith of the deceased. These areas of science and knowledge are vested interests of embalmers, undertakers, funeral directors, cemetery and crematory corporations, and cemetery commissions. The board of health, with technical assistance from MDPH and DEQE, ensures that the vested interests are in harmony with the public interests. Through legal and administrative approval and regulatory mechanisms, unsanitary and unpleasant practices are prevented and abated. If necessary the board of health may order the closing of a tomb, cemetery, or other facility (M.G.L. 114:38,39,40).

Responsibilities directly related to the public health involve the location of the cemetery, the construction of tombs and mausoleums, and the proper handling of dead bodies. Cemeteries must be so located that they do not pose any danger to the community's water supply. If surface or ground water becomes contaminated by drainage from the cemetery, health problems may ensue. It is also important that bodies, especially those of people who died of dangerous diseases, be properly handled during funerals and as they rest in tombs and mausoleums. Finally, tombs and mausoleums must be properly constructed in order to minimize the risk of accidents to anyone who enters them. Chapter 114 of the Massachusetts General Laws contains numerous sections regarding regulation of cemeteries, burial, and appeals, to which the board should refer for specific legal information.

PROCEDURES

A. BURIAL PERMITS

1. The board of health or its agent must issue a burial permit before:
 - a. a person may be buried, cremated or otherwise disposed of
 - b. a person may be removed from the town to be buried somewhere else
 - c. a body is exhumed and brought to another town, another cemetery, or another grave or tomb (M.G.L. 114:45).
2. Before the board issues any of the above permits, it must have received a satisfactory written statement containing the facts required by law. This statement, in the case of an original burial, must be accompanied by a satisfactory death certificate from the attending physician. If there is no attending physician or if his certificate is unobtainable in time or is unsatisfactory, a physician who is a member of the board of health, or employed by it or the board of selectmen, shall write the certificate.

If a permit cannot be obtained in time to move a body to another town within the Commonwealth for burial, the death certificate may substitute temporarily for the permit removal. However, if the permit is not obtained within 36 hours after the body has been removed, the body must be brought back to the town from which it was originally removed (M.G.L. 114:45).
3. If the death certificate says that the deceased was a veteran, this information must appear on the permit (M.G.L. 114:45,46,46A).

4. When the board of health receives a death certificate, it must sign the certificate and transmit it to the town clerk for registration (M.G.L. 114:45).
5. No permit for the burial of a veteran shall be issued until an affidavit has been filed with the board of health by the undertaker or any person authorized to make a burial or disposition. The affidavit will include the name and last known address of the deceased, the date and place of birth, date and place and cause of his/her death, a summary of his/her service record, and a detailed statement of the location of the burial or other disposition of his/her body.

The affidavit will be sent by the board to the town's veteran graves officer (M.G.L. 114:46A).

6. When a body is brought into a town for burial from outside the Commonwealth, it must be accompanied by a removal permit issued under the laws of the state from which it was taken. This permit is sufficient authority for burial. The board of health must make and retain a copy of this removal permit and return the original to the town from which it came.

If the body is not accompanied by a removal permit, it may not be buried until the board of health issues a burial permit. This permit will not be issued until a certificate has been given to the board giving the following information:

- a. name
- b. age
- c. cause of death
- d. name of town where he/she last resided or from which the body was brought
- e. if he/she died at sea, the name of the vessel
- f. notice if he/she was a veteran.

When the board reviews such a certificate, it must sign it and send it to the town clerk (M.G.L. 114:46).

B. LICENSING FUNERAL DIRECTORS (M.G.L. 114:49)

1. The board of health is responsible for licensing persons to act as funeral directors in its town. Licensing occurs annually, on or before May 1st. Persons licensed must be certified as qualified by the Massachusetts Board of Registration of Funeral Directors.
2. The board may revoke any license, after a hearing, for violation of any law, local ordinance, or rules and regulations of the board of health, state department of health, or Board of Registration of Funeral Directors.
3. When the board of health grants a license, it shall immediately send to the Board of Registration of Funeral Directors the name and address of the person licensed.
4. A licensed funeral director may act as a funeral director in any town provided he/she clearly indicates in what town he is licensed.
5. If a licensed funeral director dies, the board shall issue a permit for the continuance of the business under the active supervision of a person licensed as a funeral director in any town. This is done for the benefit of the estate, or persons interested in the estate, of the deceased funeral director. The board may determine the period of time and the conditions under which the business may be continued.

C. REGULATION OF CEMETERIES

1. Before any land may be used for a new cemetery or for an extension of an old cemetery, the board of health must **approve the location** after due notice and a public hearing. The board of health must maintain in its records a description of any land which it approves for burial so that it can determine whether any burials have occurred outside of the approved location (M.G.L. 114:34).
2. The board of health may, after giving public notice:
 - a. make regulations concerning cemeteries and burials within its town, and impose penalties of up to \$100 for violations of these regulations (M.G.L. 114:37)

- b. close any tomb, burial ground, cemetery, or other place of burial within the town for as long as it is considered necessary for the protection of the public health (M.G.L. 114:37)
 - c. prohibit undertakers from using tombs in which they have deposited bodies committed to them for burial as places for viewing the bodies by the public (M.G.L. 114:37-38).
3. If the board of health orders the closing of a tomb, burial ground, or cemetery, the owner of such may appeal the order to the superior court. Written notice must be given to the board of health 14 days before the appeal is entered. The order of the board of health is still in effect until the outcome of the appeal is determined (M.G.L. 114:39).
 4. If the jury finds that the tomb, burial ground, or cemetery was not injurious to the public health, the court will rescind the board of health's order and the owner of the tomb may recover the costs of the appeal from the town. If the order is sustained, the town shall recover double costs from the owner (M.G.L. 114:40).
 5. If two or more people are entitled to the use of a public cemetery lot, they must tell the board of cemetery commissioners or board of health which one shall claim it. If this designation is not made, the board of cemetery commissioners or board of health must enter into the record who shall claim the lot until the owners make their own designation (M.G.L. 114:29).

D. SUMMARY OF STATE (MDPH) REGULATIONS RELATIVE TO CREMATION, BURIAL OR TRANSPORT OF PERSONS DEAD OF DISEASES DANGEROUS TO THE PUBLIC HEALTH

1. **Cremation of Bodies Received from Outside Massachusetts** (105 CMR 315.000, under authority of M.G.L. 114:9)
 - a. Any dead body brought in from outside the Commonwealth for cremation must have the usual burial permit, and if the body is transported by a common carrier, it must have a transit permit.
 - b. No dead body brought in from outside the Commonwealth shall be cremated until the corporation authorized to perform cremation has received a certificate from a medical examiner of the Commonwealth saying that he has viewed the body and believes that no further examination or judicial inquiry is necessary.
 - c. If the death of a person brought from outside into the Commonwealth occurred more than 10 years before the body is presented for cremation, the corporation may perform the cremation upon receipt of the burial permit. In such a case, it is not necessary for a medical examiner to view the body.
2. **Transportation and Funerals of Persons Dead of Any Disease Dangerous to the Public Health** (105 CMR 310.000, under authority of M.G.L. 111:107)
 - a. If a person has died of any of the following diseases: anterior poliomyelitis, Asiatic cholera, diphtheria, infectious encephalitis, leprosy, meningococcus meningitis, plague, psittacosis, scarlet fever, smallpox, streptococcus sore throat or typhoid fever, special rules apply.
 - When the funeral occurs on the premises where the person died, only members of the immediate household, clergymen, undertaker, and undertaker's assistant may attend.
 - If the funeral occurs at a place other than where the person died, the board of health may permit a public funeral if, in the board's opinion, the body has been prepared or enclosed according to MDPH regulations. Persons who are probable carriers of the infection are forbidden to attend a public funeral.
 - b. People who die of anthrax, glanders, leprosy, plague, smallpox, or tularemia and who have surface lesions as a result of the disease must be placed in a sealed casket which is not to be opened, though the funeral may be public or private. The only way the bodies can be shown is within a sealed glass panel burial case.
 - c. Special procedures for transportation of persons who have died from diseases dangerous to the public health (as specified in the regulations) include disinfection, embalming, and/or refrigeration. The regulation also includes time limits for transport and requires special permit from the board of health for disinterment within six months of death.

CHAPTER 19.

CHAPTER 19. Cemeteries and Burial Permits

CHAPTER 20

COMMUNICABLE DISEASE REPORTING AND CONTROL

PART A: REPORTABLE DISEASES OTHER THAN TUBERCULOSIS AND SEXUALLY TRANSMISSIBLE DISEASES

BOARD OF HEALTH RESPONSIBILITIES

1. **Investigate and control the spread of communicable diseases within the town or city** (M.G.L. 111:7, and 92-116). Specific powers and duties of the board of health relating to the control of the spread of diseases dangerous to the public health, including provision of treatment, transportation, and protection of the sick person and the community at large, are contained in M.G.L. 111:6, 7 and 92-116. Advice on current public health practice regarding investigation and control of communicable diseases may be obtained from the nursing consultants at each of the regional offices of MDPH, and from the Division of Communicable Disease Control. MDPH has coordinate powers with the board of health of a town to make investigations of such diseases and other means of preventing the spread of the diseases (M.G.L. 111:7).
2. **Receive and process reports** of diseases dangerous to the public health:
 - a. Receive and process reports from physicians within the town limits, and institutions in the town (including hospitals, schools, jails, camps, etc.) or from residents, if no physician is attending the patient, of any case of the diseases defined by MDPH as "dangerous to the public health," listed below, as per M.G.L. 111:6.
 - b. Send copy of any such report to the board of health or health department of:
 - i. the town where the patient **resides**
 - ii. the town in which the patient is known to have **contracted** the disease
 - iii. the town in which the patient is known to have **exposed** any person to the disease (M.G.L. 111:111).
 - c. Notify MDPH Division of Communicable Disease Control (600 Washington St., Boston, Mass. 02111, [617] 727-2688) within 24 hours of receiving notice of any case "dangerous to the public health," except chickenpox and streptococcal infections (including strep throat and scarlet fever), which may be reported **weekly**. Daily reporting may be done by mailing the standard postcard "Report of Infectious Diseases" to the regional and the central offices of MDPH. (Form PH-C2, see appendix). Regulations are contained in 105 CMR 300.000, "Reportable Diseases," and 105 CMR 305.000, "Isolation and Quarantine."
 - d. Keep a record of all reports of disease dangerous to the public health, including:
 - i. name and location of infected persons
 - ii. disease
 - iii. name of person reporting
 - iv. date of report
 - v. other information required by MDPH (M.G.L. 111:113).

- e. Promptly give to the school committee information regarding all reports of diseases dangerous to the public health (M.G.L. 111:113).
3. **Send to MDPH, on prescribed forms**, a report of deaths in the town for the week ending Saturday noon, from all diseases declared dangerous to the public health (M.G.L. 111:29).
4. **Appoint a person to be responsible for sending notices** to MDPH regarding diseases dangerous to the public health, **and** appoint an **alternate** person to make reports during disability or absence of the primary appointee, to assure continuity of reporting (M.G.L. 111:113).
5. **Receive reports and undertake follow-up** as necessary regarding certain diseases of newborn infants, food-borne and waterborne diseases, and other diseases being monitored by MDPH.
 - a. **Newborn Infants: any inflammation, swelling, redness or unnatural discharge from the eye(s)** of an infant up to two weeks old must be reported in writing to the board of health within **six hours** after symptoms have been noted by any physician, nurse, relative or other person attending the newborn infant.

Follow-up: **The board of health must take such immediate action as it may deem necessary** to prevent blindness, including employment of professional medical services, upon receiving the report (M.G.L. 111:110 and 116).

Diarrhea of the newborn and Impetigo of the newborn are included on the list of "diseases dangerous to the public health," reports of which boards of health must receive and then report to MDPH Division of Communicable Disease Control.
 - b. **Illnesses at dairies or dairy farms:** Physicians or persons in charge of dairy farms or dairies must report to the board of health any cases of typhoid fever, paratyphoid fever, diphtheria, scarlet fever, endemic or septic sore throat, poliomyelitis, amebic or bacillary dysentery, or Asiatic cholera occurring on the dairy farm or dairy. The board of health must take necessary action to isolate the case, and report such cases immediately to the state regional health officer, with facts as to the isolation of the case, and the names of cities and towns to which affected dairy products are delivered (Reg. 1, Rules and Regulations Relative to Diseases Declared to be Dangerous to the Public Health and Reportable, 1948, 105 CMR 300).
 - c. **Food-borne Diseases, Influenza and Fever:** Receive reports and immediately notify MDPH of any outbreak of suspected food poisoning or any unusual prevalence in the municipality of diarrhea, jaundice, epidemic influenza, glandular fever, sore throat, or undiagnosed febrile (i.e., with fever) disease (Reg. 3, Rules and Regulations Relative to Diseases Declared to be Dangerous to the Public Health and Reportable, 105 CMR 300). Physicians, schools, labor camps, etc. are required to report such cases of foodborne illnesses to the local board (Reg. 2, Ibid.).
 - d. **Resident aliens with diagnosed or suspected tuberculosis, and/or with incomplete immunization:** The federal government reports to MDPH, which in turn reports to boards of health the names of aliens residing in the municipality needing follow-up for immunization or tuberculosis diagnosis or treatment. (See below, Chapter 20B.)
6. **Enforce "isolation and quarantine requirements"** of diseases declared to be dangerous to the public health (M.G.L. 111:6).
7. **Complete and submit to MDPH such "case reports" as may be required** by the Division of Communicable Diseases (e.g., enteric disease, viral hepatitis, meningitis, encephalitis, food poisoning, german measles, leptospirosis, malaria, measles, polio, rickettsialpox). Services of a public health nurse are appropriate for such investigations.

8. **Approve payment** by the town for any reasonable expenses incurred by the local official health agency in enforcing the laws regarding persons infected with any disease dangerous to the public health (other than tuberculosis), unless the person infected can assume the cost of treatment (M.G.L. 111:116).
9. A board of health may establish or designate a biologic (vaccine) distribution station (M.G.L. 111:5). A board of health not equipped to act as a biologic distribution station may designate a hospital or drug store as its agent, but may not designate more than one agency. The location, responsible personnel, equipment and operation of all distribution stations are subject to the approval of MDPH.

RECOMMENDED ACTIVITIES OF BOARD OF HEALTH

1. Maintain close contact with area physicians and nurse practitioners to facilitate prompt and accurate reporting of any disease declared dangerous to the public health. This may include provision of pre-addressed postcards with standard required information pre-printed on the back; periodic reminders of reports to physicians regarding disease outbreaks in the region or diseases to be alert for. Remind physicians to report venereal diseases directly to MDPH.
2. Ensure that the public health nurse or contracted visiting nurse follows up cases of communicable diseases to identify the source of contagion, establish control measures, check contacts, instruct patient, family members and other relevant people regarding prevention and control, and make necessary referrals and reports. If public places are involved, or if water sources or septic systems, food processing, handling, or storage is involved, a qualified sanitarian should investigate and take necessary action.

STATE RESPONSIBILITIES

(MDPH, Division of Communicable and Venereal Diseases)

1. **Determine** which diseases shall be deemed dangerous to the public health and establish appropriate control procedures (e.g., quarantine) for each disease (M.G.L. 111:6; 105 CMR 300, "Reportable Diseases;" 105 CMR 305, "Isolation and Quarantine").
2. **Receive reports** from local official health agencies of cases of diseases dangerous to the public health (at regional or central office, as determined by MDPH) and of suspected outbreaks of food poisoning.
3. **Investigate as necessary causes of outbreaks** of diseases dangerous to the public health, and provide assistance to local official health agencies in such investigations if requested (M.G.L. 111:7).

PHYSICIAN/CLINIC/PROVIDER RESPONSIBILITIES

1. **Report all cases of disease declared dangerous to the public health**, (except venereal diseases, which must be reported directly to MDPH), to the local official health agency of the town in which s/he practices. Also report illnesses suspected to be due to consumption of food; inflammation of the eye(s) of a newborn infant (up to two weeks old); certain diseases if they occur on dairy farms or dairies (see #4-b above).
2. **Report cases of certain sexually transmissible diseases** directly to MDPH (see below, Chapter 20, Part C).

RATIONALE

Control of communicable disease remains a very important objective of public health programs. Over the past several decades, advances in sanitation, nutrition, case findings and immunization have contributed to a marked decrease in incidence and mortality from diseases that were once the primary focus of public health programs. As a result, an increasing proportion of effort has been directed toward the identification and control of chronic diseases and environmental problems. There may be a tendency to dismiss communicable diseases as problems of the past that are of little contemporary importance. In fact, they remain an ever-present threat to health.

With the exception of smallpox, which appears to have been eradicated, all of the communicable diseases are still common in many parts of the world. They will be infrequent here only as long as aggressive control measures are enforced. Immunization is effective only when maintained continuously at a satisfactory level. The occurrence of poliomyelitis, rubella, and measles outbreaks in unimmunized and partially immunized populations is a recurrent reminder of this fact. Food-borne outbreaks are an ever-present threat, even with modern food handling and waste disposal methods; mass food preparation makes the consequence of human or system error extremely serious. The effectiveness of early treatment, e.g., for streptococcal infection, makes early diagnosis an important factor in limiting disability.

The risk of a communicable disease outbreak increases under any condition that interrupts continuous control measures or threatens normal sanitation. Among conditions that promote outbreaks are natural disasters (floods, earthquakes), man-made social problems (crowding, poverty, malnutrition), inadequate immunization levels, lack of personal hygiene, carelessness in food handling, contamination of water supplies, and failure to control insects or rodents.

The first responsibility of boards of health is to keep timely and accurate records of all communicable disease reports. Clusters of cases often provide the first information about breakdowns in control measures. Reports should be followed up promptly by personnel from the local health department, or from a nursing service agency providing public health services under contract with the town board of health, or in conjunction with personnel from the MDPH Division of Communicable Diseases. Cooperation with local physicians is important for both gathering information and carrying out investigations. Delay in responding to reports of communicable disease may lead to unnecessary spread of disease.

Boards of health have broad powers to ensure that contagious diseases are contained and treated, and that sources of contamination are removed, destroyed or purified.

The standard guide to communicable disease control is *Control of Communicable Disease in Man*, twelfth edition, 1975, edited by Abram S. Benenson, an official report of the American Public Health Association (available for \$4 from APHA, 1015 Fifteenth Street, N.W., Washington, D.C. 20036). This pocket guide considers communicable diseases known to exist anywhere in the world, and provides the following categories of information on each disease:

1. identification (basic description of disease, symptoms and effects)
2. occurrence (locations)
3. infectious agent
4. reservoir (e.g., humans, certain animals, soil or wherever infectious agents remain viable)
5. mode of transmission
6. incubation period
7. period of communicability
8. susceptibility and resistance
9. methods of control including:
 - a. preventive measures
 - b. control of patient, contacts, and the immediate environment
 - c. epidemic measures
 - d. international measures.

ISOLATION AND QUARANTINE

The MDPH, acting under the authority of Section 6, Chapter 111 of the General Laws, has prescribed and established Isolation and Quarantine Requirements for diseases declared to be dangerous to the public health (105 CMR 305.000). The list of reportable diseases and isolation and quarantine requirements are in the process of revision. The list presented here was last revised August 11, 1964. **Reyes Syndrome** is also a reportable disease, per M.G.L. 111:110B, added by statutes of 1978.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH LIST OF REPORTABLE DISEASES*

1964

I. REPORTABLE TO LOCAL BOARD OF HEALTH:

Actinomycosis
Animal Bite
Anthrax
Brucellosis (Undulant Fever)
Chickenpox (Varicella)
Cholera
Diarrhea of the Newborn
Diphtheria
Dysentery, Amebic
Dysentery, Bacillary (Shigellosis)
Encephalitis (specify if known)
Food Poisoning
 a. Botulism
 b. Mushrooms and other poisonous vegetable and animal products
 c. Mineral or organic poisons as arsenic, lead, etc.
 d. Staphylococcal
German Measles (Rubella)
Glanders
Hepatitis, Viral: (includes Infectious and Serum Hepatitis)

Impetigo of the Newborn
Leprosy
Leptospirosis (including Weil's Disease)
Lymphocytic Choriomeningitis
Malaria
Measles (Rubeola)
Meningitis (B. Influenzal, meningococcal, pneumococcal, streptococcal and other forms)
Mumps
Ophthalmia Neonatorum
Plague
Poliomyelitis
Psittacosis
Rabies - Human
Rickettsialpox
Rocky Mountain Spotted Fever
Salmonellosis (except Typhi and Paratyphi)
Salmonellosis: Typhi and Paratyphi (Typhoid and Paratyphoid Fevers)

Smallpox (Variola)
Smallpox Vaccination Reactions- Generalized Vaccinia, Eczema Vaccinatum
Streptococcal Infections (including Erysipelas, Scarlet Fever, Streptococcal Sore Throat, etc.)
Tetanus
Trachoma
Trichinosis
Tuberculosis
Tularemia
Typhus Fever (including Brill's Disease)
Whooping Cough (Pertussis)
Yellow Fever

II. REPORTABLE DIRECTLY TO STATE DEPARTMENT OF PUBLIC HEALTH:

Chancroid
Gonorrhea
Granuloma Inguinale
Lymphogranuloma Venereum
Syphilis

* Diseases declared by the Department of Public Health to be dangerous to the Public Health and Reportable under the authority of the General Laws, Chapter 111, Section 6. Revised August 11, 1964.

PART B: CONTROL AND ERADICATION OF TUBERCULOSIS

BOARD OF HEALTH RESPONSIBILITIES

1. **Surveillance:** Identify all cases of disease and infection within the community.
2. **Containment:** Ensure access to the necessary care and treatment of those diseased, infected, and exposed to infection.
3. **Program Management and Assessment:** Provide necessary resources, including staff or contract services, for the protection of the public against the spread of tuberculosis. Review progress towards achieving goals and objectives established by the Division of Tuberculosis Control (Massachusetts Department of Public Health) for the control and eradication of tuberculosis.

STATE RESPONSIBILITIES (MDPH Division of Tuberculosis Control, 600 Washington Street, Boston, Mass. 02111, 617-727-2709)

MDPH Division of Tuberculosis Control manages a statewide program of surveillance and containment of tuberculosis, including provision of case-finding, follow-up and treatment services. MDPH contracts with hospitals and clinics for diagnosis and treatment services, and shares the expenses for such services with the local board of health.

STATE LAWS RELATED TO TUBERCULOSIS WHICH ARE APPLICABLE TO LOCAL BOARDS OF HEALTH AND HEALTH DEPARTMENTS:

M.G.L. 111:7, 29, 50, 57, 77, 78, 79, 80, 81, 81A, 94A, 104, 111, 112, 113.

REGULATIONS CONCERNED WITH TUBERCULOSIS CONTROL:

105 CMR 350, Determining Active Tuberculosis

105 CMR 360, Standards of Admission, Treatment and Discharge of Tuberculous Patients

105 CMR 365, Minimum Standards for the Treatment of Active Tuberculosis Outside Hospitals.

Boards of health should also refer to their file of "Advisory Letters," numbered sequentially, from the Division of TB Control, for instruction, policies, and interpretations, and to the publication "Tuberculosis Control Program," Volume 1, Directory of Tuberculosis Clinics and Hospitals, and Volume 2, Data on New Tuberculosis Cases, Hospital Visits and Clinic Visits, 1971-75.

RATIONALE

Tuberculosis is a communicable disease caused by the organism known as *Mycobacterium tuberculosis*, which is most commonly spread through the air from a person with the disease to other individuals in close contact with the infected person. Public protection against the disease is essential, since the individual has little control over inhaling or avoiding contact with air contaminated with the tubercle bacillus during the normal process of respiration.

Because of the communicability of the disease, the control of tuberculosis has long been recognized as a public health responsibility of both state and local boards of health and health departments. The statutory and public health responsibilities of the Massachusetts Department of Public Health, for the control of tuberculosis, were separated in three broad categories: Surveillance, Containment, and Program Management and Assessment, in the recommendations of the "Symposium on the Control and Eradication of Tuberculosis" held in November, 1979, at the Lenox Hotel in Boston.¹ The same three categories also apply to the tuberculosis control responsibilities of local boards of health and health departments.

1. SURVEILLANCE

A. Reporting

1. **Receive reports** of patients with pulmonary and extrapulmonary tuberculosis, and record such reports on the records of the city or town (M.G.L. 111:111).
2. **Transmit the report** of a case of tuberculosis to the Massachusetts Department of Public Health within 24 hours of receipt and, if the patient resides in another city or town, also transmit a report of the case to that community (M.G.L. 111:29, 111, 112).

B. Epidemiology

1. **Investigate** each reported case of tuberculosis to determine, if possible, the source of the patient's disease and the possible spread of infection to other persons. All investigations should be conducted in a tactful manner, with utmost respect for the physician-patient relationship, patient's rights, and, foremost, the protection of the public.
2. **Identify appropriate contacts** of persons infected with tuberculosis and report this information to the Division of Tuberculosis Control on the History Card (PH-T-20) and/or other forms provided by the Division.
3. **Screen groups** within the general population, using the Mantoux tuberculin test procedure, where such screening has been determined by the Division of Tuberculosis Control to be appropriate.

2. CONTAINMENT

A. Patients and Suspected Cases

1. **Assist**, as needed, with arrangements for the transportation and hospitalization of patients eligible for admission to a hospital under contract with the Division of Tuberculosis Control. Provide prompt reimbursement to the Division for the city or town's one-half share of the cost of hospitalized residents with diagnosed or suspected tuberculosis (M.G.L. 111:80).

NOTE: A laboratory report is not a diagnosis. Boards of health should discuss any positive or negative findings on such reports with the attending physician before discussing them with the patient.

2. **Ensure prompt diagnostic and follow-up examinations** of patients and suspects (including the collection of specimens for laboratory examination) and the uninterrupted treatment of patients with diagnosed tuberculosis. Arrange for appointments for eligible patients to attend the designated contract tuberculosis clinic serving the area, as listed in the "State Plan for the Control and Eradication of Tuberculosis."² Investigate and reschedule all missed appointments. Obtain necessary information from the attending physician for patients under private care.
3. **Provide**, or assist in arrangements for, appropriate nursing services, under medical orders, for patients receiving an injectable tuberculosis drug, or supervised intermittent chemotherapy, apart from a tuberculosis clinic.
4. **Provide**, in cooperation with the attending physician, appropriate education and counseling of patients, family, and contacts regarding the disease and infection.
5. **Ensure appropriate public information and education** regarding tuberculosis in the community.

B. Contacts, Tuberculin Reactors, Ex-Patients

1. **Provide for the prompt examination of contacts** of a case of tuberculosis, **using the Mantoux tuberculin test procedure**, except when the contact is known to be tuberculin positive, in which case an appointment for a chest x-ray examination should be made. The results of the contact examination and tuberculin test should be reported to the Division of Tuberculosis Control without delay.
2. **Ensure examination** of contacts, newly discovered tuberculin reactors, former patients with no history of chemotherapy, and others eligible for preventive therapy.³ Arrange for appointments for eligible patients and ensure uninterrupted preventive therapy, where indicated, at

the contract tuberculosis clinic serving the area as listed in the "State Plan for the Control and Eradication of Tuberculosis." Investigate and reschedule all missed appointments. Obtain necessary information from the attending physician for patients under private care.

C. Aliens (Federal Law P.L. 87-301)

Ensure that all Class A and Class B aliens in the community, subject to the provisions of Federal Law P.L. 87-301, receive a medical evaluation within 30 days of arrival in the United States, and at such other times as required, and that all appropriate forms are completed and returned to the Department. (Class A Alien – patient with active or suspected active tuberculosis. Class B Alien – patient with abnormal chest x-ray not classified as active tuberculosis).

D. Uncooperative Patients

Proceed, in accordance with Massachusetts General Laws, Chap. 111, Sec. 94A or 95 for the compulsory hospitalization of an uncooperative patient, with diagnosed or suspected tuberculosis in a communicable form, but only after exhausting all reasonable attempts to influence the patient to accept treatment or isolation.

Criteria for legal action: (1) Patient is afflicted with active tuberculosis; (2) Patient is unwilling or unable to accept proper medical treatment; and (3) Patient is thereby a serious danger to public health.

E. School Employees

Provide or assist in arrangements for the tuberculin testing (Mantoux) of school employees for certification purposes. All school employees are required to have a pre-employment tuberculin test, and/or a chest x-ray in the event of a positive tuberculin reaction. MDPH retains the right to require periodic screening for employees who have been exposed to tuberculosis or who live or work in an area with a high incidence of the disease.

F. Patients Under Private Care

Make periodic inquiries, by telephone or mail, to determine current status and final disposition of a tuberculosis case under the care of a private physician.

3. PROGRAM MANAGEMENT AND ASSESSMENT

A. Fiscal and Staffing Resources

1. Provide sufficient budgeted funds and staff to ensure necessary reporting, epidemiological investigations, tuberculin testing, and nursing services for ambulatory patients, as indicated above. Statutory and public health services should be provided by employees of the board of health or health department, or by contract with a visiting nurse association or other appropriate agency.
2. Provide sufficient budgeted funds to reimburse the Commonwealth for the city or town's one-half share of the cost of care and treatment of residents admitted to hospitals, under contract with the Department, for diagnosed or suspected tuberculosis. The Division of Tuberculosis Control pays the remaining half of the cost. (Payments by Medicaid, Blue Cross, etc., if any, are collected by the hospital; and the State and the city or town share only the balance of the cost.)

NOTE: Boards of health and health departments are not relieved of their financial responsibility to pay the one-half share of the costs of hospitalization of a patient, admitted to a contract hospital for tuberculosis, or suspected tuberculosis, and whose diagnosis is subsequently designated as "No tuberculosis," or "Tuberculosis not proven."

3. Designate a person on the staff, or a person or agency under contract with the board of health or health department, who will be responsible for enforcing the laws, rules, and regulations pertaining to tuberculosis and for carrying out the public health duties and responsibilities of the board of health or health department.
4. Ensure that employees or persons under contract with the board of health or health department are appropriately trained to carry out the duties related to tuberculosis control.

B. Program Assessment

1. Examine, periodically, the surveillance and containment activities of the board of health or health department, in cooperation with the Division of Tuberculosis Control, and make necessary program changes in accordance with the size of the problem. Review morbidity, mortality and other data for the community, from time to time, with the Division of Tuberculosis Control.
2. Maintain up-to-date information on each patient, suspect, and contact in the community, including laboratory, clinical, and x-ray reports, and the current tuberculin status. Information should be coordinated with that of the central case register in the Division of Tuberculosis Control.
3. Cooperate with the Division of Tuberculosis Control in the collection, recording, transfer, and tabulation of information on patients, contacts, suspects, and tuberculin reactors necessary for the state and national control and eradication of tuberculosis.

PART C: REPORTING AND CONTROL OF SEXUALLY TRANSMISSIBLE DISEASES*

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. **Serve as a resource center** to health facilities, schools, institutions, and community groups or individuals, provide factual information regarding prevention and treatment of the sexually transmissible diseases (STDs). Refer requests to the local venereal disease nurse/epidemiologist or to the central office of MDPH, Division of Communicable and Venereal Diseases Control, 617-727-2688.
2. **Refer individuals for private or clinic treatment** and inform clients with suspected cases that all information between doctor and patient is strictly confidential. Minors may be treated without parental consent (M.G.L. 111:12F).
3. **Inform the public** regarding the importance of early detection of sexually transmissible diseases, the seriousness of delaying treatment, and the importance of revealing their contacts. Refer inquiries to the local venereal disease clinic or to the central office of MDPH, but offer encouragement and support.
4. **Promote the implementation of curricula** in schools in "growth and development" or "preparation for living" lectures, discussions or courses, that include factual information on STD transmission and detection. Studies have disclosed that large knowledge gaps exist among teenagers and young adults regarding symptoms associated with sexually transmissible diseases and methods of prevention.
5. **Publicize**, in cooperation with the nearest state STD clinic, outbreaks of STD and availability of confidential, free treatment.

* "Sexually transmissible diseases" include reportable venereal diseases (syphilis, gonorrhea, chancroid, lymphogranuloma venereum, and granuloma inguinale) and several parasitic, bacterial and fungal infections that may be sexually transmitted.

RESPONSIBILITY OF THE TOWN CLERK OR REGISTRAR

Issue a marriage certificate **only if** each applicant has submitted a medical certificate signed by a qualified physician which attests that the individual is not infected with syphilis; or, if infected, the disease is not in a communicable stage (M.G.L. 207:28A).

HEALTH CARE PROVIDER RESPONSIBILITY

All health care providers report all cases directly to the Massachusetts Department of Public Health, Division of Communicable and Venereal Diseases. In the interest of rapid epidemiological follow-up, call the local venereal disease nurse directly, so that the spread of the disease can be lessened.

STATE RESPONSIBILITIES (MDPH)

1. **Receive reports** of reportable sexually transmissible diseases directly from physicians and maintain the confidentiality of these reports. NOTE: TO ENSURE CONFIDENTIALITY, LOCAL BOARDS OF HEALTH SHOULD NOT RECEIVE ANY REPORTS OF INDIVIDUAL CASES.
2. **Establish and maintain clinics**, and provide treatment for persons suffering from venereal diseases (M.G.L. 111:117). This may be done in cooperation with local boards of health, hospitals, and/or dispensaries.

RATIONALE

The sexually transmissible diseases are a collection of different disorders that share one common feature: they are transmitted primarily through intimate personal contact. Social disapproval of these contacts has made it very difficult to plan and carry out effective control measures. There has been widespread resistance, for example, to disseminating publicly full information about the cause, natural history, and treatment of these disorders. Social stigma has impeded early detection and treatment. Required case-reporting by physicians has been incomplete because of concern for confidentiality and reluctance to identify socially disapproved behavior. Those afflicted have been reluctant to identify contacts. At all levels, it has been difficult to develop effective well-coordinated programs for disease prevention.

Although many of these disorders may occur at any age, the highest incidence of sexually transmissible diseases is among young adults (15-29). Primary prevention, therefore, will be most effective when education and control efforts are concentrated among youth, young adults, and the homosexual population. At the same time, it is important to recognize that reservoirs of disease may be present in all age groups and none should be neglected in developing comprehensive control programs.

Most of these diseases respond well to treatment, especially when it is begun early and continued as directed. Early detection and easy access to complete treatment should be program goals.

In summary, effective control will depend primarily upon wide dissemination and discussion of information regarding the nature, prevention, identification, and treatment of these diseases. Full reporting, aggressive case finding among contacts, and early effective treatment will help to control complications of patients and their contacts.

LIST OF SEXUALLY TRANSMISSIBLE DISEASES:

1. Gonorrhea*
2. Syphilis*
3. Chancroid*
4. Lymphogranuloma venereum*
5. Granuloma inguinale*
6. Non-gonococcal urethritis
7. Reiter's syndrome (conjunctivitis, urethritis, arthritis)
8. Trichomonas vaginalis
9. Monilial vaginitis
10. Scabies
11. Pediculosis
12. Herpes progenitalis
13. Genital warts
14. Molluscum contagiosum

* Reportable by physicians to MDPH, per M.G.L. 111:6.

CONTROL MEASURES

Public health control measures for sexually transmissible diseases consist primarily of early detection and case-finding of contacts to treat therapeutically and/or preventively. These measures are greatly aided by public awareness of initial symptoms and guaranteed confidentiality. To ensure confidentiality, boards of health in Massachusetts are no longer responsible for receiving case reports. Despite an increased role by MDPH in case-findings, a local board of health can and should function as a referral and informational resource.

Boards of health may establish and maintain free clinics to provide treatment for persons suffering from any of the five reportable venereal diseases (M.G.L. 111:117).

Regulations concerning venereal disease testing, reporting and control include the following:

- 105 CMR 340, Reporting and Control of Venereal Disease
- 105 CMR 345, Treatment of Persons Suffering from Venereal Disease Who Are Unable to Pay for Care
- 105 CMR 375, Serological Tests for Syphilis Needed for a Marriage Certificate.

PART III: DISEASE REPORTING AND CONTROL

CHAPTER 20.

CHAPTER 20. Communicable Diseases

Reportable Diseases Other than Tuberculosis
and Sexually Transmissible Diseases
Tuberculosis
Sexually Transmissible Diseases

CHAPTER 21

IMMUNIZATIONS AND VACCINATIONS

BOARD OF HEALTH RESPONSIBILITIES

1. **Require and enforce** the immunization or revaccination of all town residents and occupants (e.g., workers, school pupils, prison inmates) if, in the opinion of the board of health, it is necessary for public health and safety (M.G.L. 111:181, 182, 183).
2. **Provide vaccinations** without charge to residents and anyone working within the town, if such vaccinations are required by the board (M.G.L. 111:181, 182, 183).

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. Promote or provide for the routine immunization of children and certain adults against polio, measles, mumps, rubella, diphtheria, tetanus, and pertussis, and other diseases if deemed necessary. It is recommended that immunizations be performed by the individual's regular primary care physician. However, if records show that a significant percentage of residents have not been immunized, the board of health may provide immunization clinics (see Rationale below). Immunizations should also be a routine part of well-child or well-baby conferences.
2. Assist the parents of a child or a young adult in obtaining the above mentioned immunizations. If an individual cannot afford immunizations, the board of health or school health service should either provide immunization without charge or arrange for an appropriate health facility to do so.
3. Investigate school records and disease reports to determine whether an immunization clinic should be initiated. Assistance and vaccines are available free of charge from regional offices of MDPH.
4. Contact the Regional Office of MDPH, or the Division of Communicable Disease (617-727-2686) at 600 Washington Street, Boston, MA 02111, for advice or assistance regarding vaccination or immunization program or problems. Epidemiologists are also available for consultation at the following locations:

Metropolitan North	(617) 542-3685
Boston City Hospital	(617) 424-5904
Amherst	(413) 549-1045
Lakeville	(617) 947-1231 x363
Rutland	(617) 886-4711 x132
Tewksbury	(617) 727-4612

LOCAL SCHOOL COMMITTEE RESPONSIBILITIES*

Refuse school admittance to any child not immunized for the following diseases: (M.G.L. 76:15)

- a. polio
- b. measles
- c. mumps
- d. rubella (german measles)
- e. diphtheria
- f. tetanus
- g. pertussis (whooping cough)

NOTE: A notice signed by a physician is the only acceptable evidence of immunization (see immunization exceptions below).

* Or board of health in town/cities where the board provides school health services.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RESPONSIBILITIES

1. **Specify the immunizations** a child must have before he/she is admitted to public or private school. This includes nursery schools and certain day care centers (M.G.L. 76:15).
2. **Decide if a child is properly certified** regarding immunizations if a conflict of opinion exists between the physician in charge of the school health program and the child's physician (M.G.L. 76:15).
3. **Maintain and provide** certain vaccines free of charge to boards of health.

EXCEPTIONS TO IMMUNIZATION

Immunization requirements do not apply:

- a. **If** a certificate supplied by a physician states that a child's physical health would be endangered by receiving the immunization. This certificate must be submitted at the beginning of each school year to the school physician.
- b. **If** written statement is supplied from parent or guardian declaring that vaccinations or immunizations "conflict with his/her sincere religious beliefs."

RATIONALE

Death or disability due to the occurrence of childhood disease (polio, diphtheria, pertussis, tetanus, measles, rubella, and mumps) **is particularly tragic because these diseases are preventable.** In the early 1970's, it appeared that childhood diseases had been effectively controlled by vaccines, but the threat of an outbreak is still present because **all** children are not protected by immunization.

Childhood diseases have not been eliminated. The incidence of measles in the U.S. rose steadily in the mid-1970's. The consequences of this disease can include brain damage, blindness, and death. A concentrated immunization campaign starting in 1977 led to a downward trend in the occurrence of the disease. Constant vigilance is necessary to control communicable diseases. If immunization efforts are relaxed, negative, expensive consequences soon follow.

Community Education

Popular misconceptions about childhood diseases are that they are not dangerous or that they do not occur anymore. Parents must be educated on the necessity of immunization programs. The Center for Disease Control notes that too many parents are delaying vaccination until their children approach school age. The result is that millions of children remain unnecessarily susceptible to disease during their first years of life. Boards of health might take the following steps to increase community acceptance of the importance of immunization:

1. Publicize the benefits of immunization through the local media. Ready-made media packets, including sample news releases, feature stories, editorials, and radio/TV public service announcements, are available from CDC. Write or call: Centers for Disease Control
Attention: Immunization Division
Bureau of State Services
1600 Clifton Road, N.E.
Atlanta, GA 30333
Telephone: 404-329-3801
2. Urge parents to check their children's medical records. Distribute and promote the use of the Lifetime Health and Immunization Record booklet (available from the Regional Office of MDPH).

See Appendix II(21) for

1. Immunization Schedule
2. Immunization Information
3. Miscellaneous Immunization Materials.

CHAPTER 21.

CHAPTER 21. Immunizations & Vaccinations

PART IV: PERSONAL HEALTH SERVICES, HEALTH PROMOTION AND PREVENTION FOR THE COMMUNITY

INTRODUCTION

"Local government health agencies must be prepared to assume new and challenging roles in the surveillance, evaluation, regulation and, in many instances, actual delivery of personal (as opposed to ('public') health care."¹

Boards of health can promote health services and participate actively in the application of various levels of disease prevention. Education, screening and early detection of disease and prompt treatment are measures designed to prevent illness, and to avoid unnecessary personal and social expenditures to pay for remedial and custodial care for problems that should never have occurred. Boards of health have a role in enhancing and protecting the health status of the community, through both surveillance of sanitary conditions and provision of health services, counseling and referrals. By being aware of services available locally and elsewhere in the state, a board of health is able to:

- a. be in close contact with community activities
- b. act as referral agent for people seeking assistance
- c. identify unserved needs and problem areas in the community
- d. coordinate joint efforts within the community to respond collectively to health needs.

Included in the following chapters are descriptions of various community health services, lists of local and state resources and suggestions for board of health involvement in such activities.

Federal legislation, enacted for the most part in the 1960's, provides for a variety of health programs for certain population groups. These programs include family planning services, comprehensive health services to migrant farm workers, services for the handicapped, dental treatment for preschool and school age children in low-income areas, and periodic screening, diagnosis and treatment for all children and adults under 21 who are medically needy.² Increased public health services, along with an emphasis on health promotion in local communities and the reduction of chronic diseases, have broadened the responsibilities of local boards of health.

CHAPTER 22

MATERNAL AND CHILD HEALTH

BOARD OF HEALTH RESPONSIBILITIES

1. **Receive** from hospital officials or physicians written reports of infants prematurely born (defined as babies weighing less than 5½ pounds at birth) to wed mothers residing within the board's jurisdiction (M.G.L. 111:67A). Hospitals send reports of premature births to unwed mothers directly to MDPH.
2. **Provide suitable transportation of prematurely born infants** to a hospital equipped to deal with such infants, upon request of the attending physician (M.G.L. 111:67B). Board of health approval for such expenditure must be obtained **prior** to the transfer.
3. **Pay expenses** for the care and hospitalization of a prematurely born infant weighing less than 5 pounds if the parents are unable to pay and are not eligible for medicaid reimbursement, and meet the criteria established by the local board of health and the MDPH. The state will reimburse the board of health 50 percent of the expenses, pending legislative appropriation of funds. Reimbursement is in accordance with rates set by the Rate-Setting Commission, and cannot apply to expenses incurred more than 30 days prior to the receipt of the request (M.G.L. 111:67C). **Note:** The law states that the Commonwealth shall reimburse the local board of health, but in certain years the legislature has failed to appropriate funds to MDPH to carry out such reimbursement. Contact the MDPH Division of Family Health Services for current information. Amendments to the law and revised policies to clarify state and local responsibilities are anticipated in 1982.
4. **Receive and act upon reports** from physicians or hospital medical officers regarding any inflammation, swelling, redness, or unnatural discharge from an infant's eyes within a two-week period after birth (M.G.L. 111:110).
5. **Report** cases of any disease declared dangerous to the public health within 24 hours to MDPH (M.G.L. 111:112).
6. **Require** as deemed necessary and enforce the vaccination and revaccination of the town's residents and cooperate with the school committee to ensure availability of immunization to all children and others required to be inoculated (M.G.L. 111:181).
7. **Enforce lead paint laws** and regulations and report cases of lead paint poisoning. (See M.G.L. 111:190-199 and Mass. Lead Paint Regulations, Ch. 13 of this guide.)

AUTHORIZED ACTIVITIES FOR LOCAL BOARDS OF HEALTH

1. General authority to establish and maintain dental, medical, and health care services (M.G.L. 111:50). These may be in conjunction with other towns. The local board of health may establish rules and regulations for the operation of these clinics.
2. Authority to establish and maintain services for pregnant women for the purpose of carrying pregnancies to full term and delivery (M.G.L. 111:51 B). This may include medical treatment and reasonable transportation costs.

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. Provide, either directly or by contract, home visit prior to discharge from the hospital and follow-up visits by a public health nurse or community nurse to the home of premature infants. Consult the MDPH Division of Family Health Services, Maternal and Child Health Section, Perinatal Unit, for guidelines and recommended action (617-727-0944).
2. Assess level of maternal and child health service delivery in community, identify gaps in provision of screening and treatment programs, and develop or fund pilot projects to address these gaps.
3. Cooperate with other towns' boards of health and nursing services to plan and implement regionalized delivery of selected maternal and child health services.
4. Provide directly or by contract with a community nursing agency a range of pre and postnatal health care services, including education, supportive counseling, and anticipatory guidance regarding pregnancy, childbirth and child care, nutrition counseling, general health and environmental assessment, and referral to appropriate medical and human services.
5. Develop or encourage continuing education for public health nurses regarding maternal and child health services, assessment of child growth and development, and the psychosocial impact of children (normal and high-risk) on the family.
6. Provide or arrange for individual or group education regarding prenatal and postnatal care and the relationship between infant mortality/low birth weight and prenatal health which may be influenced by lifestyle habits. Topics can include smoking, alcohol and other drug use, adequate nutrition, and child auto safety.
7. Advocate or provide maternity outreach programs to identify high-risk mothers in the community, and to ensure their access to health and educational services.
8. Advocate or provide affordable (sliding-fee scale) prenatal care services to low and middle income women.
9. Develop a referral network with hospital maternity services to provide postnatal education and support to families with high risk infants, i.e., infants referred from intensive care units, low birth weight infants and newborns who required special care.
10. Set up an early case-finding system with local schools for the purpose of identifying expectant teenage mothers and providing, in conjunction with local neighborhood health centers and family planning agencies, counseling and prenatal care.
11. Provide information, via home visits or literature, on other community agencies and programs which address maternal and child health care (e.g., Supplemental Food Program for Women, Infants, and Children, MDPH Screening and Hearing Evaluation Program for Infants and Toddlers.)
12. Provide and publicize well-child conferences for community residents. These conferences should include health status assessment, developmental/learning assessments, anticipatory guidance and counseling, immunizations, and medical care follow-up.
13. Investigate availability of services for handicapped and developmentally disabled children in the community.
14. Plan and coordinate the provision of comprehensive, continuous primary and preventive care to all children in the town or city.* A number of children's services are available through various federal, state, and private agencies. The health department can sponsor an informal consortium for planning the coordinated delivery of these services to town/city residents. In turn, this necessitates establishing a data base to identify gaps in primary care delivery.
15. Cooperate with the Mass. Medicaid Office to obtain a Project Good Health contract to integrate health services for medicaid-eligible children and adolescents. Through this program, the board of health may implement federally mandated early periodic screening, diagnosis and treatment (EPSDT).

* From Springfield Blue Ribbon Commission Report, III, 7, 1979.

STATE RESPONSIBILITIES (MDPH, Division of Family Health Services, and Office for Children)

1. Provide financial assistance in the payment of expense for the hospital and nursing care of multiple-handicapped children from birth to 21 years of age (M.G.L. 111:45).
2. Establish programs to combat mental retardation in children suffering from a genetic defect causing phenylketonuria (PKU) (M.G.L. 111:4E).
3. Establish a program for the care and treatment of persons suffering from hemophilia (M.G.L. 111:6A).
4. Grant and renew licenses to establish and maintain institutions for the prenatal and short term postnatal care of unwed mothers (M.G.L. 111:51).
5. Reimburse the local board of health half the expenses for the care and hospitalization of premature infants if the parents are unable to pay; and pay the full expense for premature infants (born to unwed mothers who are unable to pay), provided the case has been approved by the local board of health (for wed mothers) or by MDPH (for unwed mothers). Reimbursement is in accordance with rates set by the Rate-Setting Commission and can include services provided no more than 30 days prior to receipt of the request by the local board of health, as well as those provided after the receipt of the request (M.G.L. 111:67A, 67C).
6. Provide informational literature to parents of newborns to determine if infant is at risk for a hearing impairment and to pay for periodic hearing testing for children from birth to three years who have been identified as being at risk. This payment is in the absence of other third party payments.
7. Establish a program for the care, treatment, and medical rehabilitation of persons suffering from epilepsy (M.G.L. 111: 4G).
8. Establish, promote and administer a statewide program for the prevention of erythroblastosis fetalis (an excessive number of immature red blood cells in the blood of the fetus and newborn child, associated with the Rh factor incompatibility between mother and child) (M.G.L. 111: 41).
9. Establish and maintain services for the treatment and care of persons suffering chronic renal diseases (M.G.L. 111:4H).

PROGRAMS ADMINISTERED BY THE STATE

A. MDPH DIVISION OF FAMILY HEALTH SERVICES

- Maternal and Infant Care Programs (MIC) to target low income communities.
- Children and Youth Services to target low income communities.
- Supplemental Food Program for Women, Infants, and Children (WIC), in conjunction with the federal government, Dept. of Agriculture. For more information: (617) 727-1246.
- Family Planning Program
- Rheumatic Fever Prevention Program
- Early Intervention Teams, Cosponsored with Dept. of Mental Health
- Services to Handicapped Children
- School Health
- Screening and Hearing Evaluation Program for Infants and Toddlers

For more information on the above programs, call the Maternal and Child Health Section of the Division of Family Health Services, 617-727-0944.

- B. **Massachusetts Office for Children** has numerous responsibilities concerning day care, placement of children in foster homes, and advocacy for children's social services.

RATIONALE

Pregnancy, infancy and childhood are life stages in which human beings experience rapid and dramatic growth and development. They are also stages in which people are particularly vulnerable to health hazards which can cause death or life-long disability. If a society is intent upon maximizing human potential for freedom and growth and minimizing suffering and disability, it must ensure high quality, comprehensive health services to all mothers, infants, and children.

Title V of the Social Security Act established the Maternal and Child Health and Crippled Children's program " for the purpose of enabling each state to extend and improve as far as practicable under the conditions in such states, services for reducing infant mortality and otherwise promoting the health of mothers and children (especially in rural areas and areas suffering from severe economic distress)." The MDPH Division of Family Health Services helps to provide preventive and therapeutic health care through their programs in maternal and child health, school health and handicapped children services. Other state funded local agencies provide services for women and children.

Boards of health should be aware of existing state and local services in order to coordinate any joint efforts and to make appropriate referrals.

PART IV: PERSONAL HEALTH SERVICES, HEALTH PROMOTION,
AND PREVENTION FOR THE COMMUNITY

CHAPTER 22.

INTRODUCTION TO PART IV

CHAPTER 22. Maternal and Child Health

CHAPTER 23

DENTAL HEALTH

BOARD OF HEALTH RECOMMENDED ACTIVITIES

1. Provide or support programs that have been shown to be effective in preventing and controlling oral health problems for school children and other groups who are at high risk to dental diseases.
2. Provide or support dental examination of children entering school, and periodic dental inspection of children in school. Ensure that parents are informed of the results of the inspection, and that a referral mechanism is in place for ensuring access to dental care for children whose parents wish them to receive services, and that children are followed to ensure that they receive needed treatment.
3. Implement or support school-based preventive dental programs which are linked to the community's dental resources. Such programs (which may occasionally include dental care as well as prevention) should include the following: administration of school water fluoridation, fluoride mouth rinse or fluoride tablet programs in communities that do not have a public water supply; control of the use of "Sweets in School", e.g., school menus, vending machines, screening, case findings, referral and follow-up of children, administration and implementation of a mouth guard program for children who participate in contact sports, supervised tooth brushing and oral hygiene practices, dental health education.

(Massachusetts State Health Plan, Goal 28, Ambulatory Care.)

STATE RESPONSIBILITIES

1. Provide technical assistance and resource material to dental programs conducted by cities and towns. Advise communities of advances in the prevention of dental disease.
2. Provide dental care for clients of the Dept. of Public Welfare's Medical Assistance Program through local dental resources.

FEDERAL RESPONSIBILITY

Identify those geographic areas of the Commonwealth which are dentally underserved and work with local Health System Agencies in placing National Health Service Corps dentists.

FLUORIDATION OF COMMUNITY WATER SUPPLIES

State Responsibilities

Chapter 111 of the Massachusetts General Laws, Section 8C, directs the Commissioner of the State Department of Public Health to determine that the fluoride content of the public water supply for domestic use in a city, town, or district is not at the optimal level for sound dental health and to notify the local board of health of these findings.

Board of Health Mandated Responsibilities

1. The board of health, having been so notified, may determine that fluoridation is in the best interests of the inhabitants of the city, town or district within its jurisdiction **and** order the upward adjustment of the fluoride content of their public water supply for domestic use.
2. The board of health recognizes that the order requiring the upward adjustment of the fluoride content of the water supply must be published as a legal notice in a newspaper with a circulation in the city or town. The board of health prepares a notice for publication such as the following:

Sample Board of Health Notice Re: Fluoridation

"The Commissioner of the Department of Public Health, Commonwealth of Massachusetts, has determined the fluoride content of the public water supply for domestic use in the town of () is not at optimal level for sound dental health and has so notified this Board of Health of his findings.

"The Board of Health of the city/town of () after making sufficient inquiry of the matter, considers an upward adjustment of the fluoride content of the water supply available for domestic use in the city/town of () to be in the best interests of the inhabitants of the city/town.

"Accordingly, it is hereby ordered that an upward adjustment to the optimal level for sound dental health be made in the fluoride content of the water supply available for the domestic use in the city/town of ().

List names of Chairperson, Secretary, Members

Board of Health

Very truly yours,

Name of Agent, Commissioner"

3. The board of health recognizes that the order to fluoridate is subject to petition initiated by 10 percent of the registered voters within 90 days from the date of the publication of the notice.
4. The board of health recognizes that if a petition is filed within 90 days of the publication of the order the question, "Shall the public water supply for domestic use in the district be fluoridated?" may be placed on the ballot at the next regular city election, election for town officers at the next town meeting, or biennial state election, whichever occurs first, but not earlier than 60 days following the date of filing the petition with the City or Town Clerk.
5. The board of health recognizes that fluoridation may not be implemented during the 90 days following the board's order and, after a petition is successfully filed, until a favorable vote is taken.
6. The board of health recognizes that if the majority of votes are against fluoridation, the water shall not be fluoridated and no order to fluoridate may be entered for a period of two years from the prior vote.

7. The board of health recognizes that once a lawful order to fluoridate has been issued and the time has passed for initiating a referendum or a favorable vote has been taken on a referendum, the appropriating authority of the city or town involved must appropriate the required funds.

Example: The Supreme Judicial Court so held in the case of Board of Health of North Adams v. Mayor or City Council of North Adams. Ma. Sh (1975) 2708. As that court notes (at p. 2725), the power exists in the local health board to "order" fluoridation. "The word order would be inappropriate if it did not comprehend the power to **compel** appropriating."

8. The board of health has the authority to order the discontinuance of fluoridation at any time if it believes the discontinuance to be in the best interests of the citizens of the community.

Board of Health Recommended Activities After an Order Has Taken Effect

1. The board of health should confer with the water officials and other municipal officials to inform residents of the facts about fluoridation, and plan for implementation of the order.
2. The board of health and other local officials should explore all potential resources, including MDPH, for financial and educational assistance in implementing community water fluoridation.
3. The board of health, local water supply officials and other municipal officials should proceed with preparations for engineering plans, approved specifications and adequate staff to carry out the fluoridation program and required monitoring procedures.
4. Registered professional engineers who are experienced in water treatment design and construction should be employed to conduct engineering cost studies, prepare preliminary designs, select equipment and prepare final plans, specifications and contracts for the fluoridation program.
5. The board of health and other officials should enlist the active support of the local citizens in educating the community on the benefits of water fluoridation.

CHAPTER 23.

CHAPTER 23. Dental Health and Fluoridation

CHAPTER 24

COMMUNITY CLINICS AND SERVICES

BOARD OF HEALTH RESPONSIBILITIES AND AUTHORITY

According to Massachusetts law, local boards of health have authority and responsibility in the following areas:

1. **Establish and maintain** dental, medical, and health clinics, and conduct general education relative to matters of public health in connection with such clinics. Clinics must operate under the direction of the local board of health and shall be conducted subject to any rules and regulations the board of health may establish. The provision and maintenance of clinics may also be provided by several boards of health, representing one or more towns on a regionalized basis (M.G.L. 111:50). M.G.L. 111:51 B specifically authorizes local boards of health and other agencies to establish and maintain clinics or other services for pregnant women for the purposes of carrying pregnancies to full term and delivery.
2. **Respond to state suggestions** and/or mandates concerning the provision of clinic services and screening for various diseases, and operate clinics and services in accordance with rules and regulations promulgated by MDPH.
3. **Require and enforce** the vaccination and revaccination of all the inhabitants of their towns, and provide them with the means of free vaccination, if in their opinion it is necessary for public health or safety (M.G.L. 111:181). (See Chapter 21 on Vaccinations and Immunizations.)

BOARD OF HEALTH RECOMMENDED ACTIVITIES

Clinic services and screening programs can be established and maintained in the following areas:

1. Promotion of prenatal, maternal, child and school health, as part of a comprehensive program to meet community needs in this field.
2. TB control program including prevention, casefinding, treatment, and education.
3. Venereal disease or sexually transmissible disease program including prevention, casefinding, treatment, and education.
4. Communicable disease programs including prevention, immunization, diagnosis, epidemiological investigation, and treatment.
5. Chronic disease programs including prevention, early detection and rehabilitation.
6. Dental disease prevention and control program.
7. Promotion of health for the aged.
8. Screening for scoliosis and kyphosis.

Examples of Community Clinics

Immunization Clinics

Immunizations are administered to children and adults to prevent serious illness and disease. In most cases, the MDPH will provide the vaccines free of charge. The vaccines available from the state Division of Communicable Disease are either purchased from private companies or are manufactured by the Biologic Laboratories of the State Laboratory Institute.

Those vaccines purchased from the companies include:

1. measles – mumps – rubella triploid (MMR)
2. oral polio (TOPV or OPV)
3. influenza – for high risk persons.

Those vaccines manufactured by the Biologic Laboratories include:

1. diphtheria – tetanus – pertussis (DTP)
2. diphtheria – tetanus (DT)
3. immune serum globulin
4. tetanus immune globulin
5. tetanus toxoid adsorbed
6. tetanus – diphtheria toxoids – for adults (Td)
7. typhoid.

The state Division of Communicable Disease estimates the needs of various vaccines through an analysis of their records and disease trends. Some of these vaccines are stocked in regional depots where they can be picked up.

List of Regional Depots

For assistance in obtaining immunization supplies, every board of health should be assigned to one of the following depots or the state laboratory:

- | | |
|---------------------------------------|-----------------------|
| 1. Metropolitan North | 617-542-3685 |
| 2. Boston City Hospital | 617-424-5904 |
| 3. Lakeville | 617-947-1231 Ext. 363 |
| 4. Rutland | 617-886-4711 Ext. 132 |
| 5. Tewksbury | 617-727-4612 |
| 6. Amherst | 413-549-1045 |
| 7. Pittsfield Health Department | |
| 8. Springfield Health Department | |
| 9. Western Mass. Hospital — Westfield | |

DPT, TD, MMR, and oral polio vaccines may be obtained at the regional depots. Other vaccines may be obtained from the state laboratory.

There are two provisions regarding the use of immunization supplies:

1. A board of health shall not receive any amount that exceeds a 30-day supply.
2. The board of health shall make a monthly report to the Division of Communicable Disease regarding usage by age and by public or private sector.

The board of health assumes the cost of the vaccine for some immunization programs, such as pneumococcal vaccine.

Well-Child Clinics

Infants and children are particularly vulnerable to health hazards. Well-child clinics, which may be operated by public health nurses or under contract by a nursing service agency, attempt to assess and treat children's health problems and to support positive health behavior. In addition to health assessments, a well-child program should provide counseling, parent education, referral information and home assessments.

Senior Health Clinics

Community health clinics can provide health care for the elderly who may not have access to private practitioners or who need supportive services in addition to typical medical services. Services for the elderly can include: routine checkups, counseling, referrals, education, screening for the detection of glaucoma, diabetes, hypertension, anemia, and other debilitating diseases which affect the elderly.

"Well-adult" clinics and instruction on health maintenance, including nutritional counseling, self-care, relaxation, and exercise, can be both medically and socially beneficial for all age groups. The board of health may act as a coordinator, supporter or sponsor of such programs.

TB Clinics and Screening

These clinics can include Mantoux testing and access to chest x-ray follow-up for positive reactors, either in-house or by arrangement with other community agencies (see chapter on communicable disease).

Dental Clinic

Dental services can be made available to all school age children, designated classes or age groups, or specifically to those who are financially and medically needy. A sliding fee based on ability to pay may encourage many people from the community who cannot afford private care to obtain basic services. A board of health can provide cost-effective services by using dental hygienists for cleaning, screening, and providing topical fluoride treatments.

Other Clinics Being Offered by Various Boards of Health Within the State:

1. blood pressure clinics
2. vision and hearing screening
3. occupational health clinic for town employees
4. women's cancer detection program
5. sexually transmissible disease clinics and screening
6. smoking cessation clinics
7. lead poisoning screening clinics (see Ch. 13 of this guide)
8. developmental screening for children.

STATE RESPONSIBILITIES: Massachusetts Department of Public Health:

1. Consider and act upon applications for licenses to operate clinics, and ensure that such clinics operate in accordance with MDPH requirements. The MDPH must determine the need for a clinic at that site and must make periodic inspections of all licensed clinics (M.G.L. 111:51).
2. Define diseases deemed dangerous to public health and may make regulations necessary to prevent and control them (M.G.L. 111: 6). Such regulations may include provision for screening and clinics.
3. Establish and maintain tuberculosis, cancer, and muscular dystrophy clinics with or without the cooperation of local boards of health (M.G.L. 111: 57, 57A, 57B, 77, 78 and 94D).
4. MDPH may provide clinics for the aged with the cooperation of the board of health. A local board may either separately or with other boards, establish and maintain such clinics (M.G.L. 111: 57C, 117).
5. MDPH may establish and maintain clinics for venereal disease with the cooperation of local boards of health (M.G.L. 111:117).

RATIONALE

Boards of health may establish community clinics and programs with health department staff or by contract with community agencies to deal with needs for personal health services, health education, and prevention of disease. The board of health can often tap existing public and private health and medical care resources in its effort to ensure health protection to the whole community. Boards of health can provide or sponsor information and referral services, to help community members identify and contact appropriate agencies or providers of care. Either with its own staff or by contract with a visiting nurse association, family planning association or other community agency, the board of health can provide routine and special clinics, outreach programs, and other health promotion and guidance activities. In many instances, boards of health subsidize home health agencies' provision of health promotion services in the home to mothers and infants, the elderly in need of supportive services or monitoring, families with handicapped children, and others in need of assistance. Costs of such health promotion and guidance activities are small in relation to the benefits to both taxpayers and the people served, since these services reduce the need for other professional services or for institutionalization.

Determining the need for a community clinic or program may involve (a) a review of the vital statistics for the area, (b) consideration of disease trends (determining unusual occurrences), (c) consumer surveys, (d) health department's perception of unmet community needs, and (e) a review of the scope, caseload and outreach efforts of community agencies and services. Verifying the need for the establishment of any community service is crucial before investments of personnel or funds are made.

HOME HEALTH SERVICES

INTRODUCTION

In current use, the term "home health services" refers to those skilled nursing services, physical therapy, and other services provided in patients' homes by certified home health agencies, i.e., those certified by the medicare and medicaid programs. Most certified home health agencies' patients are predominantly elderly medicare and medicaid patients, with a small proportion having other forms of insurance or paying out-of-pocket for their care.

Before the implementation of the medicaid and medicare programs (Titles XVIII and XIX of the Social Security Act) in 1966, most public health nurses employed by boards of health provided a certain amount — sometimes substantial — of "bedside care" to the elderly, the poor, children and others who called upon the "town nurse" for assistance. To provide "bedside care" was only one of several reasons the public health nurse might visit the home — she also visited the home to do assessments and counselling under the auspices of various maternal and child health programs, handicapped children's programs, follow-up of well-child clinics or of contacts with children in the schools, reports of communicable diseases, food poisoning problems, and other health problems. If a "visiting nurse association" or other private non-profit nursing agency served the community, a portion of the bedside care was provided by the Visiting Nurse Association.

Changes in third-party coverage for medical services have strongly influenced both the orientation of most towns' nursing services and the patterns of use of health care services on the community. State and federal funding of medicare and medicaid programs have encouraged many residents to seek private medical service instead of requesting assistance from the town nurse. Many town and city boards of health have become certified home health agencies; others have reduced their home visiting, relying on visiting nurse associations to provide certified home health services. In a few rural towns, the public health nurse still provides some "bedside care" to patients who would be eligible for third party reimbursement **if** the services were provided by a certified agency.

The trend recently has been for boards of health to drop their status as certified agencies and to contract with certified home health agencies, such as visiting nurse associations, for all or some of the bedside and public health nursing services. Although the board of health need not pay another agency for the care of patients with third party coverage, the board of health may choose to pay the agency to visit certain types of patients, such as those discharged from medicare or medicaid "skilled nursing" programs who need occasional visits to provide support, counselling, and a general check; or such as mothers of high-risk newborn infants. Many towns in the state provide health promotion and guidance services either directly or by contract with home health agencies.

Contracts between boards of health and private nursing agencies frequently include provision for school health services and for various clinics — screening clinics, well-child or well-adult clinics, pre-natal counselling — that have been provided by public health nurses in the past. A dilemma common to many towns is how to describe, quantify, assign costs and assure adequate provision of the **remaining** public health nursing functions.

RECOMMENDED BOARD OF HEALTH ACTIVITIES

Boards of health need to keep in mind their mandated responsibilities for prevention and control of communicable diseases and food poisoning, which frequently require a nurse's investigation and counselling, and home assessment and counselling for premature infants. If school health services and home health services are being provided by other agencies, the board of health may consider either keeping public health nurses on duty to provide community services (including those that are required, certain types of home visits, and clinics), or making explicit arrangements for a community nursing agency to provide the desired and required services.

Although this Guide will not attempt to outline management guidelines for boards of health that retain their certification as home health agencies, such boards should not lose sight of their responsibilities to provide public health nursing functions. Boards of health may find it useful to investigate regional cooperative arrangements to improve both home health services and public health nursing services. Assistance in planning and in finding financial support for regional efforts may be obtained from MDPH.

CHAPTER 24.

CHAPTER 24. Clinics, Home Health and
Other Community Services

CHAPTER 25

SCHOOL HEALTH SERVICES

Please refer to Chapter 16, Part A, "School Facilities," for a summary of board of health responsibilities, recommended activities and discussion of both health services for schools, and sanitary and environmental concerns.

Also consult the *Administrator's Guide for the School Health Program*, 1979, MDPH Division Family Health Services, for extensive discussion of school health program components.

At MDPH, the School Health Program in the Division of Family Health Services provides consultation regarding standards for school health services, with major emphasis on prevention and early detection of disabilities that adversely affect progress in school, and prevention of infectious diseases. The Division provides staff people at both the regional and central offices of MDPH.

CHAPTER 25.

CHAPTER 25. School Health

CHAPTER 26

MENTAL HEALTH

For most of the twentieth century, mentally disabled people have been cared for in large, usually state operated, institutions. Since the early sixties, the trend has been to treat the mentally disabled in community based settings. The rationale behind "deinstitutionalization" is that the community setting provides an environment in which people are more likely to lead productive and enjoyable lives than they would in an institution. For many residents of institutions, the inadequate treatment they receive, along with the effects of being separated from their homes and families, and the lack of self-reliance the institution fosters, is more destructive than the illness for which they were originally institutionalized. It has also been found that more cost-effective care can often be provided in the community than in institutions. Finally, there appears to be a trend in the courts to challenge the process of involuntary commitment; thus, more and more patients may be discharged from institutions in the future, and appropriate facilities for follow-up, treatment and care will be necessary.

Problems may arise in the community because of deinstitutionalization. These problems may develop because of community rejection of the former patients, which is often due to a wide range of fears, misunderstandings, and myths about the mentally ill. The board of health should be aware of the problems deinstitutionalized patients may face in the community, and should be aware of and participate in developing programs and services that may be able to help patients.

RECOMMENDED BOARD OF HEALTH ACTIVITY

If the board of health determines that services for the mentally ill or retarded are needed in its town or city, it is advised to contact the area director of the Department of Mental Health (DMH) or the area board of DMH. Massachusetts is divided into seven regions by the Department of Mental Health, which contain a total of 40 areas.

The area boards of DMH are mandated under Chapter 19 of the Mass. General Laws of 1966 to do the following along with other responsibilities:

- act as representatives of the citizens of the area
- advise DMH regarding local needs and resources for the development of mental health and mental retardation services
- advise in the recruitment and selection of the area director and associate area director
- review and approve the Advisory Council plan and review and make recommendations for the annual budget
- review programs and services that are a part of the area program but which are not conducted in state-operated facilities
- establish program priorities and admission policies for all facilities and services.

The board of health may also wish to present its concerns to the area health service agency, which is responsible for developing a five-year plan for health service development in the region, or to the Office of State Health Planning.

CHAPTER 26.

CHAPTER 26. Mental Health

CHAPTER 27

ALCOHOLISM AND OTHER SUBSTANCE ABUSE

The major thrust in dealing with drug, alcohol, and cigarette abuse in Massachusetts has included the development and implementation of a comprehensive network of services for the prevention, treatment, and rehabilitation of abusers. The effective treatment of substance abuse requires a wide range of services to meet the total needs of the individual. To optimize availability, accessibility, and continuity of care, the services should be coordinated and integrated on a community basis.

ALCOHOLISM

Alcohol abuse, which results in increased illness and use of health services, accounts for 10 per cent of all health care expenditures in Massachusetts. The total costs associated with alcoholism, including loss in production, health care costs, car accident losses, fire losses, cost of violent crime, highway safety, criminal justice and alcohol-related programs, was estimated to be \$1.4 billion in 1976.¹ In 1971 the legislature passed the Comprehensive Alcoholism Treatment and Rehabilitation Act, which abolished the crime of public intoxication and provided for the establishment of detoxification and other alcoholic treatment facilities, through the Division of Alcoholism of MDPH. The Driver Alcohol Education Program of 1974 gives the Division of Alcoholism responsibility for the program, which allows a person picked up for driving while intoxicated to participate in an alcoholism education program with a 90-day suspension of license to drive as an alternative to losing his license indefinitely.

The Division has developed an alcoholism prevention program that seeks to change four of the usual causes of alcohol abuse: mixed feelings towards alcohol use on the part of the public, lack of actual information about alcohol and its effects, lack of social structures that support alternative behavior to using alcohol, lack of consistent behavior norms regarding alcohol use.

Communities that are concerned about alcohol problems in their area or the lack of services available to them should contact the Regional Office of MDPH, Division of Alcoholism. The Division can provide information about services available to the community, and can put the community in contact with a local council on alcoholism.

Refer to M.G.L. 111B, Alcoholism Treatment and Rehabilitation Law; M.G.L. 90:24D, Driver Alcohol Education and Treatment Law, and related laws M.G.L. 17:14, M.G.L. 6A:16, M.G.L. 123:35, M.G.L. 19:1, and M.G.L. 125:16.

DRUG ABUSE

The "White Paper on Drug Abuse: A Report to the President from the Domestic Council on Drug Abuse Task Force" of 1975 defines drug abuse as the:

"nonmedical use of any drug in such a way that it adversely affects some aspect of the user's life, i.e., by inducing or contributing to criminal behaviors, by leading to poor health, economic dependency or incompetence in discharging family responsibility, or by creating some other undesirable condition."

This broad definition includes not only the traditional notions of drug abuse, such as narcotics addiction and misuse of sedatives, tranquilizers, and stimulants, but also problems such as adverse reactions to drugs either through physician's error in prescribing them or the individual's failure or refusal to follow the physician's directions.

The annual cost of drug abuse in the U.S. has been estimated to be about \$10 billion, which is more than seven times the estimated cost of alcoholism. This cost includes the cost of crimes by drug users; lost productivity; criminal justice proceedings; and medical care, therapy programs, and rehabilitation.

The services provided by a comprehensive drug abuse program generally fall within the following categories:²

Prevention:	community health education, consultation and education
Ambulatory Care:	outpatient, day care, detoxification, methadone maintenance, crisis intervention
Acute Inpatient Care:	medical, surgical, and psychiatric services, detoxification, emergency medical services
Post Acute Care:	residential care, vocational rehabilitation
Health Administration:	criminal justice system interface, manpower training, research and evaluation.

The Division of Drug Rehabilitation of the Massachusetts Department of Mental Health (DMH) is responsible for drug prevention, treatment, and rehabilitation programs. Communities needing information on drug programs and services should contact the Division of Drug Rehabilitation, DMH, through the regional office of DMH.

CIGARETTE SMOKING

The Centers for Disease Control in Atlanta, Georgia estimates that 39.3 percent of all men over 21 and 28.9 percent of all women over 21 were cigarette smokers in 1975. Though this is a decline in percentage since 1970, the number of smokers has risen in this period, and the per capita rate of cigarette consumption has also risen.³

Cigarette smoking is the major cause of lung cancer in the U.S., and is also associated with chronic bronchitis and emphysema. It has also been found to be associated with fetal and infant mortality, and in combination with other risk factors, such as hypertension and elevated serum cholesterol, increases the risk of cardiovascular disease.

Measures to protect the nonsmoker and provide financial incentives for stopping or reducing smoking include:

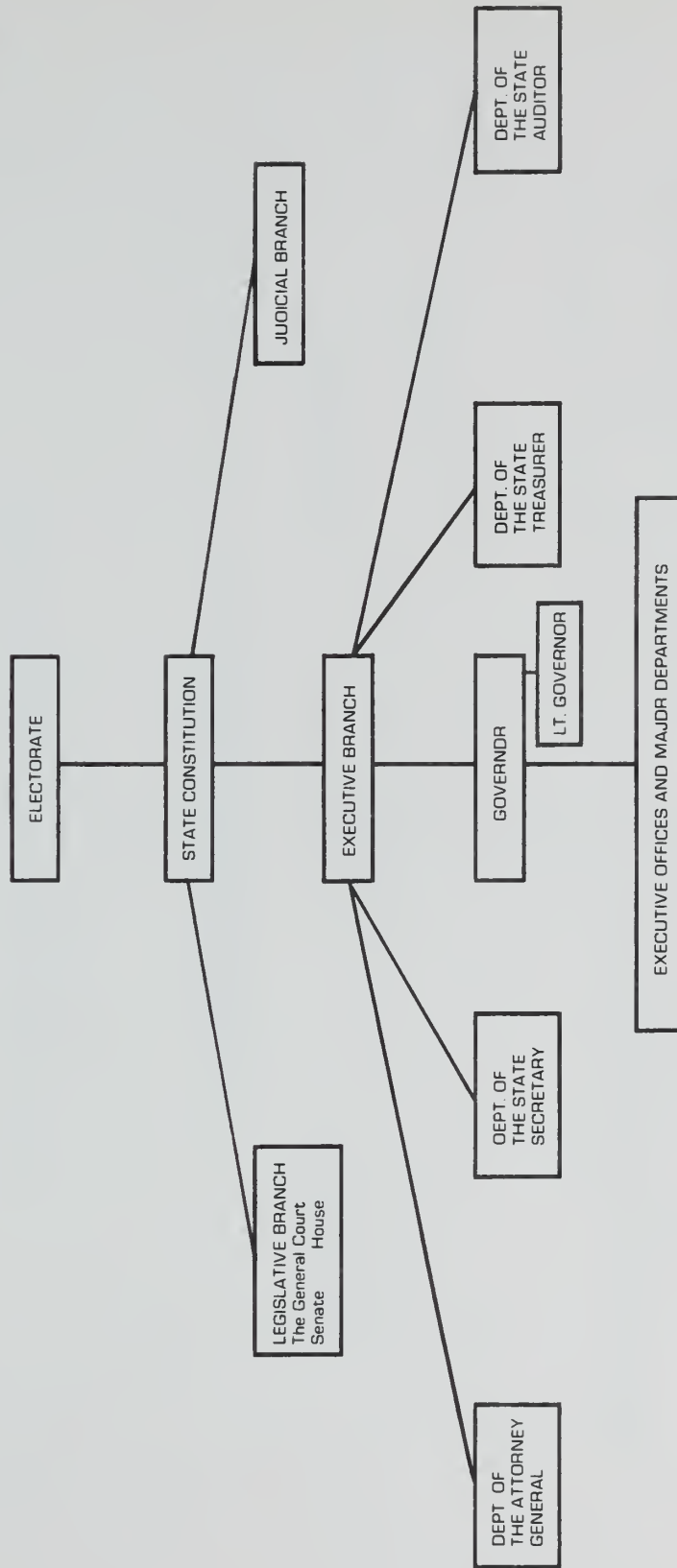
1. M.G.L. 270:21 prohibits smoking in public elevators, supermarkets, and MBTA vehicles, and requires the designation of nonsmoking areas in public places such as museums, libraries, hospitals, and nursing homes.
2. some insurance companies are reducing premiums for non-smokers.
3. bills have been introduced in the U.S. Senate and Massachusetts Legislature that would establish a graduated tax on cigarettes based upon tar and nicotine content.

Information about cigarette smoking and smoking cessation programs can be obtained through the Division of Preventive Medicine in the regional offices of MDPH and other community agencies and health services providers.

CHAPTER 27.

CHAPTER 27. Alcoholism and Other
Substance Abuse

SCHEMATIC OF STATE GOVERNMENT AND AGENCIES



APPENDIX I (1.)

DEPARTMENT OF
ELDER AFFAIRS

- Division of Administrative and Fiscal Services
- Division of Advocacy Services
- Division of Program Services

EXECUTIVE OFFICE OF
TRANSPORTATION AND
CONSTRUCTION

- Department of Public Works
- Massachusetts Bay Transportation Authority
- Massachusetts Port Authority
- Massachusetts Turnpike Authority
- Massachusetts Parking Authority
- Massachusetts Aeronautics Commission

EXECUTIVE OFFICE OF
COMMUNITIES AND
DEVELOPMENT

- Office of Policy Development
- Division of Community Development
- Division of Social and Economic Opportunity
- Division of Community Services

EXECUTIVE OFFICE
OF PUBLIC SAFETY

- Department of Public Safety
- Registry of Motor Vehicles
- Military Division
- Division of Civil Defense

EXECUTIVE OFFICE
FOR ADMINISTRATION
AND FINANCE

- Department of Revenue
- Division of Personnel Administration
- Division of Fiscal Affairs
- Division of Purchasing
- Comptroller's Division

EXECUTIVE OFFICE
OF ECONOMIC
AFFAIRS

- Department of Commerce and Development
- Department of Labor and Industries
- Department of Maritime Development

EXECUTIVE OFFICE
OF CONSUMER
AFFAIRS

- Department of Public Utilities
- Consumers Council
- Community Antenna Television Commission
- Division of Registration and Banking and Insurance
- Division of Standards
- Alcoholic Beverages Control Commission
- State Racing Commission

EXECUTIVE OFFICE
OF EDUCATIONAL
AFFAIRS

- Board of Education
- Department of Education
- Board of Higher Education
- Council on the Arts and Humanities
- Board of Trustees of the State Library

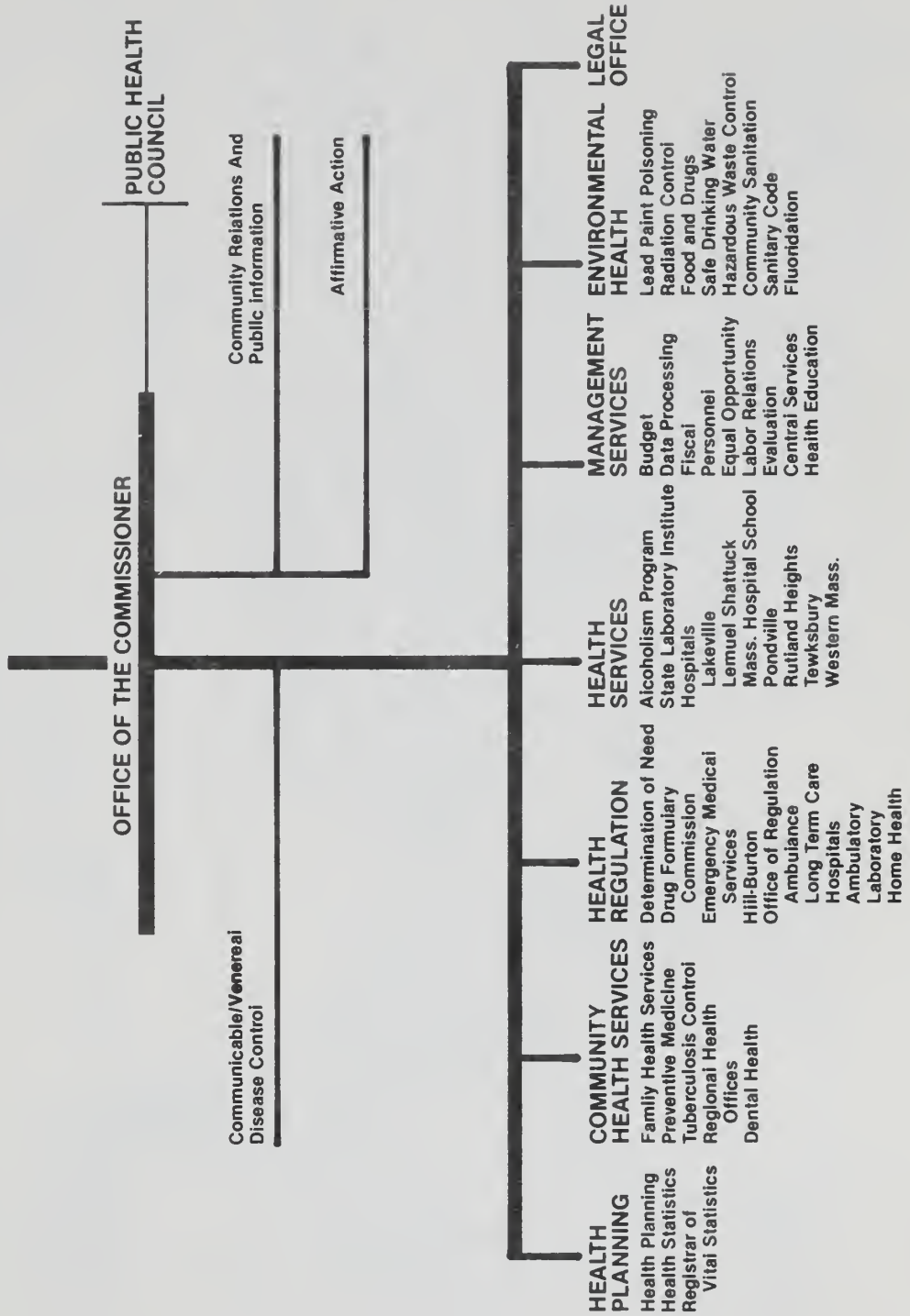
EXECUTIVE OFFICE
OF ENVIRONMENTAL
AFFAIRS

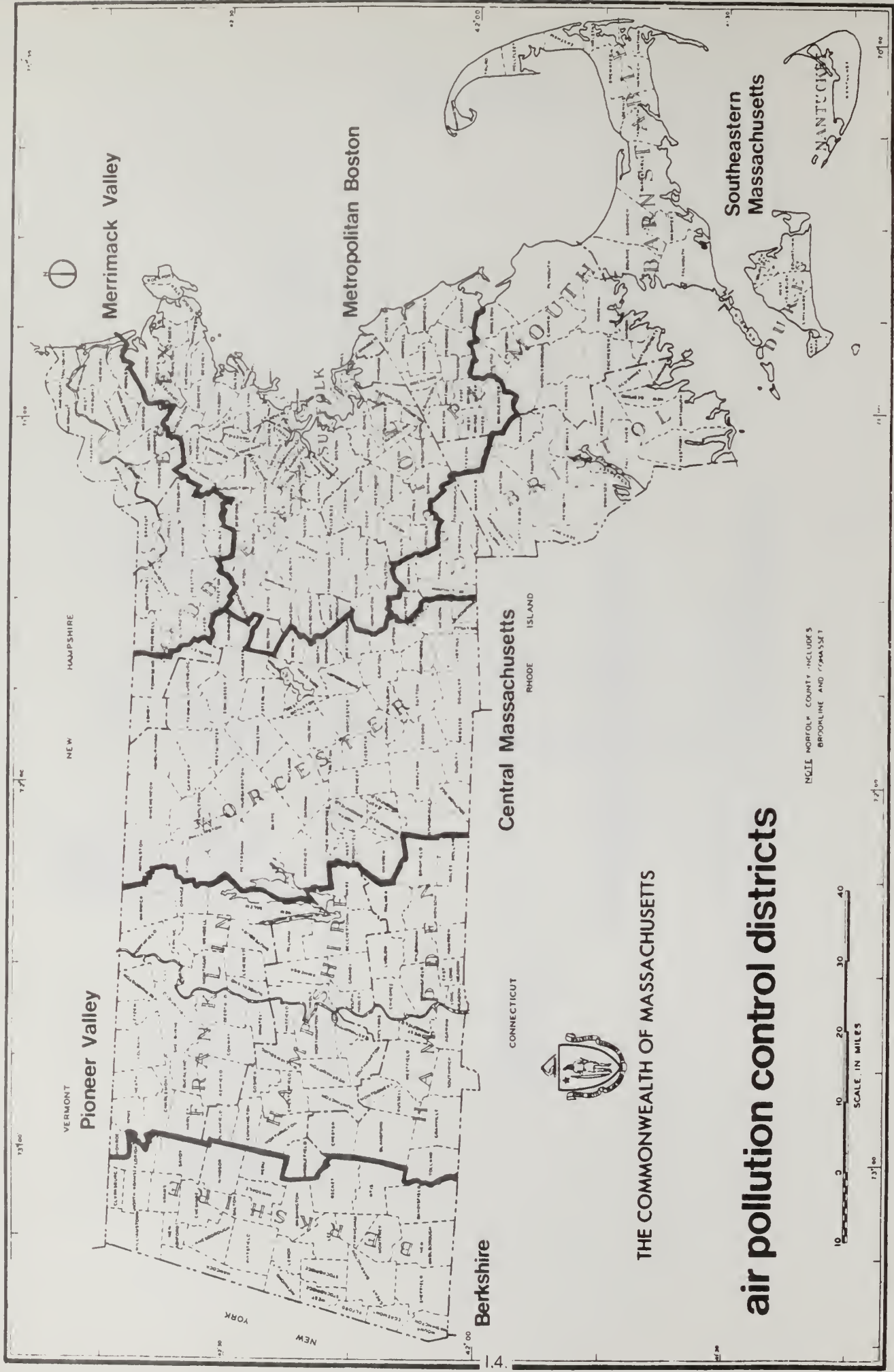
- Department of Environmental Quality Engineering
- Department of Environmental Management
- Metropolitan District Commission
- Department of Fisheries, Wildlife & Recreational Vehicles
- Department of Food & Agriculture

EXECUTIVE OFFICE
OF HUMAN SERVICES

- Department of Public Health
- Department of Mental Health
- Department of Youth Services
- Massachusetts Commission for the Blind
- Department of Correction
- Department of Public Welfare
- Office for Children
- Rate Setting Commission

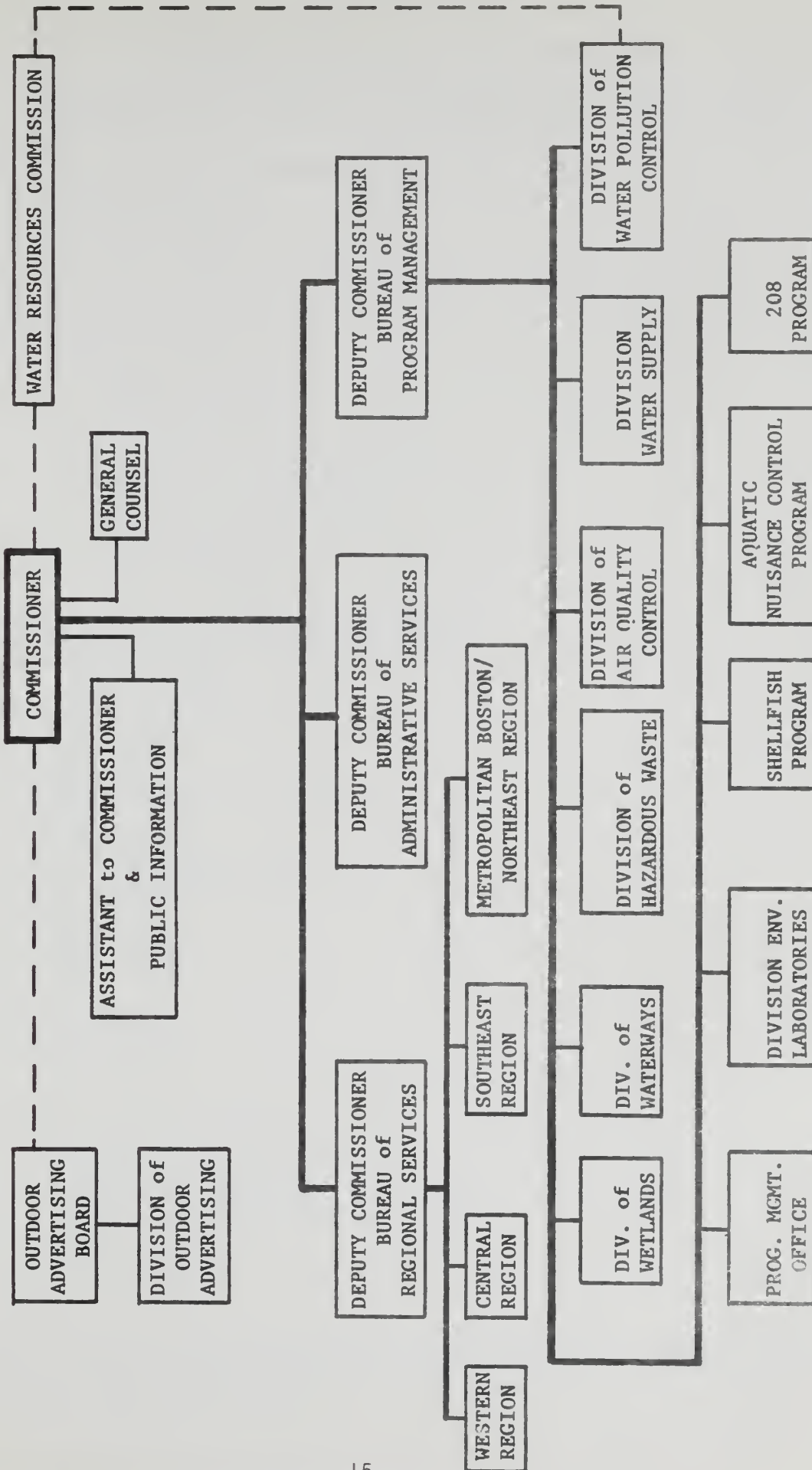
**EXECUTIVE OFFICE OF HUMAN SERVICES
DEPARTMENT OF PUBLIC HEALTH**





MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

ORGANIZATIONAL CHART



APPENDIX I(2)

DIRECTORY OF RESOURCES

SELECTED STATE GOVERNMENT OFFICES*

EXECUTIVE OFFICE FOR ADMINISTRATION AND FINANCE	727-2050
State House Boston, MA 02133	
Bureau of Building Construction	727-5319
EXECUTIVE OFFICE OF COMMUNITIES AND DEVELOPMENT	727-3264
100 Cambridge Street Boston, MA 02202	
Division of Community Development	727-7130
1 Ashburton Place Boston, MA 02108	
State Building Code Commission	727-6916
Division of Community Service	727-7001
Division of Social and Economic Opportunity	727-7004
10 Tremont Street Boston, MA 02108	
EXECUTIVE OFFICE OF CONSUMER AFFAIRS	727-7755
1 Ashburton Place Boston, MA 02108	
Department of Public Utilities 100 Cambridge Street Boston, MA 02202	727-3500
Department of Banking and Insurance 100 Cambridge Street Boston, MA 02202	727-3145
Alcoholic Beverages Control Commission 100 Cambridge Street Boston, MA 02202	727-3040
Consumer's Council 100 Cambridge Street Boston, MA	727-2605
Boards of Registration 100 Cambridge Street Boston, MA 02202	
Boards of Registration include:	
Embalming and Funeral Directing	
Sanitarians	
Operators of Drinking Water Supply Facilities	
Operators of Waste Water Treatment Facilities	
Plumbing	
Health Officers	

* Additional references in *Citizens' Guide to State Services* (1981), prepared by Citizen Information Service, Office of the Secretary of State, One Ashburton Place, Boston, MA 02108, 617-727-7030 or 1-800-392-6090 (outside Boston metro area).

EXECUTIVE OFFICE OF EDUCATIONAL AFFAIRS	727-7785
1 Ashburton Place, 6th floor Boston, MA 02108	
Department of Education 31 St. James Avenue Boston, MA 02116	727-5792
Division of Special Education	727-5792
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS	727-9800
100 Cambridge Street, 20th floor Boston, MA 02202	
Office of the Secretary of Environmental Affairs	
Division of Conservation Services	727-1552
Coastal Zone Management	727-9530
Environmental Impact Review	727-5830
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	727-3188
100 Cambridge Street Boston, MA 02202	
Bureau of Solid Waste Disposal	727-4293
Division of Forests and Parks	727-3180
Division of Water Resources	727-3267
Wetlands Restrictions	727-8893
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING (see schematic)	
100 Cambridge Street Boston, MA 02202	727-2690
Bureau of Solid Waste 100 Cambridge St., 19th floor Boston, MA 02202	727-4293
Division of Air Quality Control One Winter St., 8th floor Boston, MA 02108	727-2658
Division of Hazardous Waste One Winter Street Boston, MA 02108	727-0774
Division of Waterways 100 Nashua Street Boston, MA 02114	727-4797
Shellfish Program 323 New Boston Street Woburn, MA 01801	935-2160
Aquatic Nuisance Control Program 100 Nashua Street Boston, MA 02114	727-4797
208 Program 100 Cambridge Street Boston, MA 02202	727-7436
Division of Outdoor Advertising 80 Boylston Street Boston, MA 02116	727-8392

Division of Water Pollution Control 110 Tremont Street Boston, MA 02108	727-3855
Oil Spills	
Day	727-8167
Night	727-3189
Division of Water Supply One Winter St., 6th floor Boston, MA 02108	727-2692
Cross Connections	
Drinking Water Quality	
Division of Wetlands Protection 100 Cambridge Street Boston, MA 02202	727-9706
DEQE Laboratory	
Lawrence Experiment Station 37 Shattuck Street Lawrence, MA 01852	682-5237
DEQE Regional Offices	
Northeast Regional Office Tewksbury State Hospital Tewksbury, MA 01876	811-7261
Southeast Regional Office Lakeville Hospital Middleboro, MA 02346	947-1231
Metro-Boston Northeast Regional Office Woburn, MA 01801	935-2160
Central Regional Office 75 Grove Street Worcester, MA 01605	754-3226
Western Regional Office Western Mass. Public Health Center University of Massachusetts Amherst, MA 01003	(413) 549-1917
DEQE Division of Water Pollution Control Regional Offices	
Eastern Regional Office 323 New Boston Street Woburn, MA 01801	935-2160
Southeast Regional Office P.O. Box 537 North Pembroke, MA 02358	826-2624 727-9675
Western Regional Office University of Massachusetts Draper Hall Amherst, MA 01003	(413) 549-1755 (413) 549-6442
DEPARTMENT OF FOOD AND AGRICULTURE	727-3000
100 Cambridge Street Boston, MA 02202	
Division of Milk Control	727-3028
Division of Land Use	727-6632

Division of Dairying and Animal Husbandry	727-3008
Division of Farms	727-3037
State Reclamation Board	727-3035
Animal Health	727-3011
Pesticide Board	727-7712
Plant Pest Control	727-3031
Poultry and Poultry Products	727-3033
DEPARTMENT OF FISHERIES, WILDLIFE AND RECREATIONAL VEHICLES	
100 Cambridge Street Boston, MA 02202	727-1614
Division of Fisheries and Wildlife	727-1614
Division of Marine and Recreational Vehicles	727-3151
Public Access Board (Westboro)	366-4470
Division of Marine Fisheries	727-3193
METROPOLITAN DISTRICT COMMISSION	727-5215
20 Somerset Street Boston, MA 02108	
Environmental Quality Division	727-8920
Sewer Division	727-5253
Water Division	727-5274
Parks and Recreation Division	727-9547
EXECUTIVE OFFICE OF HUMAN SERVICES	727-8065
State House Boston, MA 02133	
DEPARTMENT OF CORRECTION	727-3578
100 Cambridge Street Boston, MA 02202	
DEPARTMENT OF MENTAL HEALTH	727-5656
160 N. Washington Street Boston, MA 02114	
Region I — Northampton State Hospital Northampton, MA 01060	(413) 584-7781 584-1644
Region II — Glovin Regional Center 214 Lake Street Shrewsbury, MA 01545	(617) 727-8542 845-9111
Region III — Danvers State Hospital Hathorne, MA 01937	(617) 727-9550 774-5000
Region IVA — Metropolitan State Hospital Waltham, MA 02154	(617) 727-1453 894-4300
Region IVB — Medfield State Hospital Medfield, MA 02052	(617) 727-1627
Region V — Brockton Multi-Service Center Brockton, MA 02401	(617) 727-7905 580-0800
Region VI — Lindemann Mental Health Center Government Center Boston, MA 02114	(617) 727-5975
DEPARTMENT OF PUBLIC HEALTH (see schematic diagram)	727-2700
600 Washington Street Boston, MA 02111	

Regional Offices:

Central Regional Health Office (617) 886-4711
Rutland Heights Hospital Ext. 145
Rutland, MA 01543

Northeastern Regional Health Office (617) 851-7261
Tewksbury Hospital
Tewksbury, MA 01846

Southeastern Regional Health Office (617) 947-1231
Lakeville Hospital 727-1440
Lakeville, MA 02346

Western Regional Health Office (413) 545-2563
University of Massachusetts
Amherst, MA 01003

Pittsfield Sub-Office (413) 545-2563
246 North Street
Pittsfield, MA 01201

Assistant Commissioners (600 Washington St., Boston, 02111)

Community Health Services	Rm 770	727-9670
Health Regulation and Planning	Rm 214	727-2700
Health Services	Rm 207	727-2708
Management Services	Rm 214	727-9660
General Counsel	Rm 218	727-2665
Environmental Health	Rm 770	727-2660

MDPH Divisions

Alcoholism 727-1960
775 Boylston Street
Boston, MA 02116

Ambulance Regulation 727-6452
80 Boylston Street
Boston, MA 02116

Communicable and Venereal Diseases
Room 606A
Communicable Diseases 727-2682
Influenza Program 426-5247
Vaccination Assistance Program 727-3685
Venereal Diseases 727-2688

Data Processing 727-6945
80 Boylston Street
Boston, MA 02116

Dental Health 727-0732
Room 770
600 Washington Street
Boston, MA 02111

Determination of Need 727-6274
80 Boylston Street
Boston, MA 02116

Family Health Services 727-3372
839 Boylston Street
Boston, MA 02116

Fluoridation Room 770 600 Washington Street Boston, MA 02111	727-0732
Food and Drugs 305 South Street Jamaica Plain, MA 02130	522-3700
Health Education Room 705 600 Washington Street Boston, MA 02111	727-0730
Health Statistics and Research 600 Washington Street Boston, MA 02116	727-4164
Hill-Burton 80 Boylston Street Boston, MA 02116	727-5138
Home Health Program 80 Boylston Street Boston, MA 02116	727-5138
Hospitals and Ambulatory Care 80 Boylston Street Boston, MA 02116	727-5138
State Laboratory Institute 305 South Street Jamaica Plain, MA 02130	522-3700
Lead Poisoning Prevention Program 305 South Street Jamaica Plain, MA 02130	522-3700
Long-Term Care 80 Boylston Street Boston, MA 02116	727-5860, 5864
Mass. Nutrition Resource Center 600 Washington Street, Rm. 705 Boston, MA 02111	727-7173
Periodic Medical Review 80 Boylston Street Boston, MA 02116	727-1296
Preventive Medicine Room 705 600 Washington Street Boston, MA 02111	727-2662
Radiation Control Room 770 600 Washington Street Boston, MA 02111	727-6214
Sanitary Code Room 770 600 Washington Street Boston, MA 02111	727-2660

Social Services 727-5822
39 Boylston Street
Boston, MA 02116

Tuberculosis Control 727-2709
Room 360
600 Washington Street
Boston, MA 02111

MDPH HOSPITALS

Lakeville Hospital (617) 947-1231
Main Street 727-1440
Lakeville, MA 02346

Lemuel Shattuck Hospital (617) 522-8110
170 Morton Street
Jamaica Plain, MA 02130

Massachusetts Hospital School (617) 828-2440
Randolph Street
Canton, MA 02021

Pondville Hospital (617) 727-6350
Box 111
Walpole, MA 02081

Rutland Heights Hospital (617) 886-4711
Maple Avenue
Rutland, MA 01543

Tewksbury Hospital (617) 727-4610
East Street
Tewksbury, MA 01876

Western Mass. Hospital (617) 727-7547
91 East Mountain Road
Westfield, MA 01085

DEPARTMENT OF PUBLIC WELFARE

600 Washington Street
Boston, MA 02111

Medicaid Division — Rm. 740 727-8082
Medicaid Claims Control Center 1-800-262-3963

DEPARTMENT OF SOCIAL SERVICES

150 Causeway
Boston, MA 02114

727-0900

DEPARTMENT OF YOUTH SERVICES

294 Washington Street
Boston, MA 02108

727-2731

OFFICE FOR CHILDREN

120 Boylston Street
Boston, MA 02116

727-8900

Council for Children 727-8900
Day Care and Group Care Licensing 727-8956
Families for Foster Children 727-8900
Help for Children 727-8996

Regional Offices Group Day Care and Family Day Care

Region I — Office for Children 1618 Main Street, Springfield, MA 01003	(413) 736-1822
Region II — Office for Children 75A Grove Street, Worcester, MA 01607	(617) 727-8773
Region III — Office for Children 639 Massachusetts Avenue, Cambridge, MA 02139	(617) 692-1572
Region IV — Office for Children Gregory Street, Middletown, MA 01949	(617) 727-8787
Region V — Office for Children 1001 Watertown Street, West Newton, MA 02165	(617) 727-2532
Region VI — Office for Children 120 Boylston street, Room 307, Boston, MA 02116	(617) 727-8898
Region VII — Office for Children Lakeville Hospital, Lakeville, MA 02363	(617) 947-8090

EXECUTIVE OFFICE OF PUBLIC SAFETY

1 Ashburton Place Boston, MA 02108	727-7775
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DEPARTMENT OF PUBLIC SAFETY 1010 Commonwealth Avenue Boston, MA 02215	566-4500
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OTHER OFFICES AND AGENCIES

DEPARTMENT OF LABOR AND INDUSTRIES 100 Cambridge Street Boston, MA 02202	727-3545
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Division of Occupational Hygiene 39 Boylston Street Boston, MA 02116	727-3982
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Division of Industrial Safety 100 Cambridge Street Boston, MA 02202	727-3460
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DEPARTMENT OF ELDER AFFAIRS 110 Tremont Street Boston, MA 02108	727-8931
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CIVIL SERVICE COMMISSION 1 Ashburton Place Boston., MA 02108	727-8370
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OFFICE OF THE ATTORNEY GENERAL 1 Ashburton Place Boston, MA 02108	727-8400
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Public Protection Bureau	727-8400
Consumer Protection Division	727-8400
Division of Environmental Protection	727-2265

OFFICE OF HANDICAPPED AFFAIRS State Official Affirmative Action 1 Ashburton Place , Room 301 Boston, MA 02108	727-6257
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MASSACHUSETTS OFFICE OF ENERGY RESOURCES
73 Tremont Street, Room 700
Boston, MA 02108

727-4732

Solar Office
Room 849

727-7297

COUNTY OFFICES OF EXTENSION SERVICE

Berkshire	Berkshire Co. Extension Service 46 Summer Street Pittsfield, MA 01201	413-448-8285
Franklin	Franklin Co. Extension Service 425 Main Street — Court House Greenfield, MA 01301	413-774-2902
Hampden	Hampden Co. Extension Service 1499 Memorial Avenue W. Springfield, MA 01089	413-736-7204
Hampshire	Hampshire Co. Extension Service 33 King Street Northampton, MA 01060	617-584-2556
Worcester	Worcester Co. Extension Service 36 Harvard Street Worcester, MA 01608	617-753-5477
Middlesex	Middlesex Co. Extension Service 105 Everett Street Concord, MA 01742	617-369-4845
Essex	Essex Co. Extension Service 562 Maple Street Hathorne, MA 01937	617-774-0050
Norfolk	Norfolk Co. Extension Service 460 Main Street Walpole, MA 02081	617-668-0268
Bristol	Bristol Co. Extension Service Center Street Segreganset, MA 02773	617-669-6744
Plymouth	Plymouth Co. Extension Service High Street Hanson, MA 02341	617-293-3541 617-447-5946
Barnstable	Barnstable Deeds & Probate Bldg. Cape Cod Extension Service Barnstable, MA 02630	617-362-2511 Ext. 201

Massachusetts Cooperative Extension Service
University of Massachusetts, Amherst, MA 01003

Associate Director 214 Stockbridge Hall	413-545-2715
Home Economics Extension 214 Stockbridge Hall	545-2197
Agriculture and Natural Resources 215 Stockbridge Hall	545-0611
Community Resource Development 211 Stockbridge Hall	545-0611
4-H Youth Programs 219 Stockbridge Hall	545-2646
Expanded Food and Nutrition Education Program (EFNEP) 218 Stockbridge Hall	545-2195
Energy Conservation Analysis Program Tillson Farm	545-2132
Solar Utilization Economic Development and Employment (SUEDE) Tillson Farm	545-2132
Center for Rural Communities Draper Hall	545-0060
Citizen Involvement Training Program (CITP) Hasbrouck Laboratory	549-4970
New England Small Farms Project Draper Hall	545-0060
Entomology Extension Service and Insect Identification Fernald Hall	545-2284
Pesticide Coordinator Dept. of Entomology Fernald Hall	545-0932

POISON CONTROL CENTERS

Greater Boston	(617) 232-2100
Outside Boston	1-800-682-9211
Hanover, N.H.	(603) 643-4000
Pawtucket, R.I.	(401) 521-5055
Providence, R.I.	(401) 277-4000
Portland, Maine	(207) 871-2381

Appendix I(3)

UNITED STATES GOVERNMENT, SELECTED OFFICES

DEPARTMENT OF AGRICULTURE

Animal and Plant Inspection Service

Plant Protection Division (617) 894-2400
424 Trapelo Road
Waltham, MA 02154

Plant Protection and Quarantine 223-7751
Custom House
Boston, MA 02109

Veterinary Services 894-2400
424 Trapelo Road
Waltham, MA 02154

Food and Nutrition Services 223-0272
New England Regional Office
33 North Avenue
Burlington, MA 01803

Family Nutrition Programs 223-0266

Special Nutrition Programs 223-0267

WIC Program (Women, Infants, and Children) 223-6360

Food Safety and Quality Service

Fruit and Vegetable Division
Inspection Service 389-2480
34 Market Street
Everett, MA

Meat and Poultry Inspection Programs 223-6557
801 Custom House
Boston, MA 02109

130 New Market Square 445-8986
Roxbury, MA 02118

CONSUMER PRODUCTS SAFETY COMMISSION

223-5576

100 Summer Street
Boston, MA 02110

DEPARTMENT OF ENERGY

223-6748

150 Causeway Street
Boston, MA 02114

ENVIRONMENTAL PROTECTION AGENCY (EPA)

223-7223

Regional Office
JFK Federal Building
Boston, MA 02203

To Report Oil and Hazardous Material Spills 223-7265

Air and Hazardous Materials Division 223-5186

Air Program	223-5609
Noise Program	223-5709
Pesticides Program	223-5126
Radiation Program	223-5708
Solid Waste Program	223-5775
Toxic Chemicals Program	223-0585
New England Regional Laboratory	
Surveillance and Analysis Division	861-6700
60 Westview Avenue	
Lexington, MA 02173	
Water Programs Division	
Municipal Facilities Branch	223-7213
Water Quality Branch	223-5130
Water Supply Branch	223-6486
FOOD AND DRUG ADMINISTRATION	
Boston District Office	223-5857
585 Commercial Street	
Boston, MA 02109	
DEPARTMENT OF HEALTH AND HUMAN SERVICES	223-7291
Regional Office	
JFK Federal Building	
Boston, MA 02203	
Human Development Services Office	223-4382
Administration on Aging	223-1880
Administration on Children, Youth, and Families	223-6450
Developmental Disabilities	223-5746
Native American Services	223-5108
Public Services Administrator	223-6868
Rehabilitation Services Administration	223-6820
Work Incentive Program	223-4236
Public Health Service Hospital	782-3400
77 Warren Street	
Boston, MA	
Public Health Service	
Regional Office	
JFK Federal Building	
Boston, MA 02203	
Division of Alcohol, Drug Abuse, and Mental Health	223-4256
Division of Health Resources Development	223-6680
Division of Health Services Delivery	223-6898
Division of Preventive Health Services	223-4045
Office of Health Maintenance Organizations	223-3827
Office of the Regional Health Administrator	223-6860
Quarantine and Immunization Information	567-3030
Logan Airport	
East Boston, MA 02128	

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

Regional Office
JFK Federal Building
Boston, MA 02203 223-4066

Boston Area Office
15 New Chardon Street
Boston, MA 02114 223-4100

DEPARTMENT OF LABOR

Occupational Safety and Health Administration
Regional Office
16-18 North Street
Boston, MA 02109 223-6710

Boston Area Office
400-2 Totten Pond Road
Waltham, MA 02154
Safety Division 890-1238
Health Division 890-2678

Review Commission
100 Summer Street
Boston, MA 02110 223-3757

VETERANS ADMINISTRATION

Regional Office
JFK Federal Building
Boston, MA 02203 227-4600

Drug Clinic
125 Lincoln Street
Boston, MA 02110 223-4571

Outpatient Clinic
17 Court Street
Boston, MA 02108 223-2021

Hospitals:

200 Springs Road
Bedford, MA 01730 275-7500

150 S. Huntington Avenue
Boston, MA 02130 232-9500

1400 VFW Parkway
West Roxbury, MA 02132 323-7700

North Main Street
Florence, MA 01060 584-4040

APPENDIX I (5.)

SELECTED PROFESSIONAL AND SERVICE ORGANIZATIONS

American Public Health Association
1015 15th Street, N.W.
Washington, DC 20005

Conservation Law Foundation of New England, Inc. 742-2540
3 Joy Street
Boston, MA 02108

Massachusetts Association of Community Health Agencies 893-4792
24 Crescent Street
Waltham, MA 02154

Massachusetts Environmental Health Assoc. 791-0112
15 Germain Street
Worcester, MA 01062
(Walter G. Irvine, Jr., Treasurer)

Massachusetts Health Officers Association 729-8721
P.O. Box 34
Winchester, MA 01890
(Michael Saraco, Executive Secretary)

Massachusetts Nurses' Association 482-5465
20 Ashburton Place
Boston, MA 02108

Massachusetts Public Health Association 442-2208
55 Dimock Street
Boston, MA 02119
(Helen A. Meltzer, Exec. Director)

New England Health Education Association, Chapter of (617) 969-1090
Society for Public Health Education
c/o American Lung Association of Massachusetts
385 Eliot Street
Newton Upper Falls, MA 02164

APPENDIX I (6.)

PRIVATE AND VOLUNTARY ORGANIZATIONS

Because of the number of programs offered and the fact that any listing would soon become outdated, boards of health are advised to compile their own list of local agencies which may be utilized by residents. The following chart may be used to enter names, addresses and telephone numbers of agencies serving an area:

PROGRAM TYPE	AGENCY/ORGANIZATION		
	Name	Address	Phone #
Alcoholism Prevention Treatment Rehabilitation			
Ambulatory/Emergency Care			
Emergency Assistance			
Cancer Screening			
Child Abuse and Neglect Hot Lines Parent Counseling Support Groups Reporting			
Child Development Screening			
Dental Health and Education			
Diabetes Screening			
Drug Use/Abuse Prevention Treatment Rehabilitation			
Family Planning Counseling			
Glaucoma Testing			

PROGRAM TYPE**AGENCY/ORGANIZATION**

	Name	Address	Phone#
Genetic Screening			
Hearing and Vision Testing			
Home Health Aides			
Hypertension Screening			
Immunizations			
Maternal and Child Health Services			
Mental Health Services			
Nutrition			
	Counselling		
	Supplemental Foods		
Obesity Control			
Pregnancy			
	Testing		
	Counselling		
	Education		
	Preparation for childbirth		
Rape Counselling and Prevention			
Tuberculosis			
	Testing		
	Treatment		
Smoking Cessation			
Stress Education and Control			
Venereal Disease Control			

APPENDIX I (7.)

SELECTED REFERENCES

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- Model Standards for Community Preventive Health Services, August 1979. DHEW, National Center for Disease Control, Atlanta, Georgia.
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- Food Service Sanitation Manual. DHEW Public Health publication no. FDA 78-2081. 1976.
- Resource Recovery from Municipal Solid Waste. Washington: National Academy of Sciences. 1975.
- Air Pollution Primer. New York: American Lung Association. 1974.
- Stern, Arthur, et al. Fundamentals of Air Pollution, 3rd ed. New York: Academic Press. 1977.
- Basic Housing Inspection. DHEW, Public Health Service, CDC, Atlanta. 1976.
- State of Danger: Childhood Lead Paint Poisoning in Massachusetts: A Report. Massachusetts Advocacy Center. Boston: The Center, 1974.
- Olishifski, Julian B., Fundamentals of Industrial Hygiene. Chicago: National Safety Council, 1979.
- Freedman, Ben., Sanitarians Handbook: Theory and Administrative Practice for Environmental Health. New Orleans: Peerless Publishing. 1977.
- Salvato, Joseph A. Jr., Environmental Engineering and Sanitation, 2nd ed. New York: Wiley Interscience. 1972. (contains chapters on solid waste, radiation, air pollution, food protection, housing, pesticides, communicable disease, water supply, waste water treatment)
- Dawson, Alexandra and McGregor, Gregor I., Environmental Law Handbook. Boston: Conservation Law Foundation of New England. 1975.
- Grad, Frank P., Public Health Law Manual, 3rd ed. Washington, D.C.: American Public Health Association. 1973.
- Control of Communicable Diseases in Man, ed. Abram S. Benenson, 12th ed. Washington, D.C.: American Public Health Association. 1975.
- Bregman, J. E., and Gehm, Harry W., Handbook of Water Resources and Pollution Control. New York: Van Nostrand Reinhold. 1976.
- Manual of Individual Water Supply Systems, 1973. Environmental Protection Agency. Office of Water Programs, Water Supply Division.
- Hammer, Mark J., Water and Waste Water Technology. New York: John Wiley and Sons, Inc. 1975.
- Food Safety: Where Are We? Committee on Agriculture, Nutrition, and Forestry, U.S. Senate, 1979. Washington, D.C.: U.S. Government Printing Office.

de Figueiredo, Mario P. and Splittstoesser, D. F. et al., Food Microbiology: Public Health and Spoilage Aspects. Westport, Conn.: AI Publishing Co. 1976.

The Harvard Medical School Health Letter. Harvard Medical School, Department of Continuing Education. 1980.

Hanlon, J., Rogers, F. and Rosen, G.: A Bookshelf on the History and Philosophy of Public Health. American Journal of Public Health 50:445, 1960.

American Journal of Public Health. 1015 50th Street, NW, Washington, D.C. 20005.

Journal of Environmental Health. 1200 Lincoln Street, Suite 704, Denver, CO 80203.

Journal of Public Health Nursing

Nursing Outlook. American Journal of Nursing Company. 10 Columbus Circle, New York, NY 10019.

REFERENCES

Chapter 1

1. Judge Wells, in *City of Salem vs. Eastern Railroad Company*, 98 Mass. 431, stated: "Their (board of health) action is intended to be prompt and summary. They are clothed with extraordinary powers for the protection of the community from noxious influences affecting life and health." (1868)
2. *Commonwealth vs. Leonard R. Cutter*, 156 Mass. 52. (1892)

Chapter 2

1. Wing, K. *Law and the Public Health*. St. Louis: C.V. Mosby Co., 1976.
2. Grad, F.P. *Public Health Law Manual*. American Public Health Association, New York, NY, 1970.
3. Wing, op. cit., p. 17.
4. Wing, op. cit., p. 18.
5. Grad, F.P., op. cit., p. 6
6. Ibid.
7. Ibid.
8. Ibid.
9. Chapter 1, *Massachusetts Sanitary Code*, 105 CMR 400.00 (c).
10. Derived from suggestions by Grad, F.P., op. cit.
11. Adapted from Westman, R.T. *The Law in Relation to Public Health*. U.S. Department of Health Education and Welfare memo.
12. Ibid.
13. Ibid.

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1. Hanlon, J.J. *Public Health Administration and Practice*. St. Louis: C.V. Mosby Co., 1974.
2. Adapted from Fossett, J. *Administration and Enforcement of Title 5 by the Intermunicipal Health Officer*.
3. The largest district association in Massachusetts - composed of 16 towns in Northcentral Massachusetts.

Chapter 4

1. *Model Standards for Community Preventive Health Services*, U.S. Department of Health, Education and Welfare, August, 1979, Surgeon General's Report to Congress, p. 8.
2. Ibid., p. 81.
3. Ibid., p. 84.
4. The Town of Andover has developed an Office of Community Development to consolidate and coordinate responsibilities of the board of health, conservation commission, planning board and building inspectors.

Other towns have developed commissions and natural resources, and other concentrations of boards to expedite decision-making and provision of community services.

Chapter 6

1. Gordan, R. *We Interrupt This Program*, U/Mass Citizen Involvement Training Project, 1978.
2. Adapted from *We Interrupt this Program*, op. cit., p. 25.
3. Adapted from *Health Education Strategies for Local Health Departments*, Department of Health Education and Welfare, p. 2.

REFERENCES

Chapter 8

1. Chanlett, E.T. Environmental Protection, New York: McGraw Hill Co., 1973 p. 312.
2. Ibid., p. 330.

Chapter 9

1. "Insecticides," Encyclopedia Americana, Vol. 15. New York: Americana Corporation. 1977. p. 210.

Chapter 10

1. The Conservation Commission is composed of three or more members lawfully appointed under Chapter 40, Section 8C of the Massachusetts General Laws to represent the town or city. The Conservation Commission is responsible for regulating work that involves removing, filling, dredging, or otherwise altering wetlands. (Wetlands Protection Act, M.G.L. 131:40)
2. Burton, L.E., and Smith. Public Health and Community Medicine. Baltimore: The Williams and Wilkins Company, 1975, pp. 448, 449.
3. Chanlett, E.T. Environmental Protection. New York: McGraw Hill Co., 1973, p. 102

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1. Chapman, R.S. Current EPA Health Research, with Emphasis on Epidemiology. Course on Air Pollution and Health Effects. Sponsored by the American Medical Association, Chicago, 1978.
2. Mage, D.T. The Nature of Air Pollution in the United States. Course on Air Pollution and Health Effects. Sponsored by the American Medical Association, Chicago, 1978.
3. Ibid.

4. U.S. Environmental Protection Agency Research Summary - Acid Rain. EPA-600/8-79-028, October, 1979.
5. Bell, J.A. Physician's Guide to Noise Pollution. Presented at the Department of Environmental, Public and Occupational Health, American Medical Association, Chicago, 1973.
6. B & K Instruments, Inc. Cleveland, Ohio 44142
7. Environmental Protection Agency, Region 1, Room 2303, J.F.K. Building, Boston, Mass. 02203
8. Noise Level Survey of Residential Areas and Proposed Abatement Strategies. City of Bloomington, Minnesota 1976.

Chapter 12

1. Employment Safety and Health Guide. Commerce Clearing House, Inc., 1978.

Chapter 13

References available from Childhood Lead Poisoning Prevention Program, 305, South Street, Jamaica Plain, MA 02130.

- Klein, R.M. Advance in Pediatrics-Lead Poisoning. Paper available through Childhood Lead Poisoning Prevention Program.
- Needham, H.L., Gunnoe, C., Leviton A., Reed, R., et al., Deficits in Psychologic and Classroom Performance of Children With Elevated Denture Lead Levels. New England Journal of Medicine. 13:689-695, 1979.
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REFERENCES

Chapter 16

1. Environmental Statistics, 1978. U.S. Department of Commerce, National Technical Information Service PB - 294:141, March 1978.
2. Dekany, J.P. School Asbestos Control Program. Paper presented to National Environmental Health Association. June 26, 1979.
3. Clean Air Act, Environmental Protection Agency Emission Standards. 40 CFR, Part 61, Subpart B, Section 61:21.
4. Massachusetts Department of Public Health memo to District Health Officers, August 2, 1979, regarding legal opinion.
5. Morbidity and Mortality Weekly Report, Centers for Disease Control, 29:46-48, 1980.

Chapter 20

1. Symposium on the Control and Eradication of Tuberculosis, Hotel Lenox, Boston, November 27-30, 1979. Massachusetts Department of Public Health.
2. State Plan for the Control and Eradication of Tuberculosis. Boston, Massachusetts Department of Public Health, 1980.
3. Preventive Therapy of Tuberculous Infection. American Thoracic Society, American Lung Association, Centers for Disease Control, September, 1974.

Part IV

Introduction

1. The Role of Official Local Health Agencies, The Nation's Health. American Public Health Association, October 1974, pp. 3-4.
2. Citizens Research Council of Michigan. A Study of Organization for the Delivery of Local Health Services in Michigan, Report No. 244, Detroit, MI 1973.

Chapter 28

1. Berry, E.R. Estimating the Economic Costs of Alcohol Abuse. New England Journal of Medicine. 298:620-1, 1976.
2. Planning Committee: Proposed Substance Abuse Component of the State Health Plan, March 1979.
3. Adult Use of Tobacco, 1975. Department of Health Education and Welfare, Centers for Disease Control, Atlanta, Georgia, June 1976.

APPENDIX I

I. Directory of Resources

1. Schematic Organization Charts:
 - A. Massachusetts State Government
 - B. Massachusetts Department of Public Health
 - C. Dept. of Environmental Quality Engineering
2. Selected State Government Offices
3. Selected U.S. Government Offices
4. Massachusetts Health Systems Agencies
5. Professional and Voluntary Organizations
7. Selected References

APPENDIX II

II. Supplemental Materials and Information
for Guide Chapters

APPENDIX II(2)

DEFINITIONS RELATING TO THE HEARING IN COURT

1. **Evidence** is all that is legally presented in court to establish the truth or proof of any alleged fact.
2. The statements of a witness under oath are called his **testimony**.
3. A **deposition** is a statement by a witness, or in other words, testimony presented under oath outside of a court with representatives of both sides of a controversy present, properly signed and executed by the witness. It is admissible as evidence in court during trial.
4. A **confession** is a signed statement by the defendant made freely and not under duress that he did certain things.
5. A **stipulation** is an agreement made before trial by either party acknowledging that certain facts are true without further argument.
6. **Privileged information** is confidential information acquired in the practice of a profession from a patient or client, which does not have to be told in court during private litigation except when the patient or client waives his right to keep the information confidential and privileged. Such information may not remain privileged in certain criminal actions, however, as trials for murder. What the priest hears in the confessional is privileged. Everything the physician learns in the course of talking to, examining, and treating his patient is privileged. Communicable disease morbidity reports and records, as well as laboratory findings and reports relating to a person received by health officers, are likewise privileged. But vital statistics records, such as birth and death certificates, are public records and inspection is permitted; however, the health officer or registrar in charge of them may use reasonable discretion in making regulations as to who may inspect them and when.
7. It is a rule of evidence that **hearsay** cannot be admitted as evidence, for example, quoting what someone else said or thought in the form of an opinion or description of an occurrence. The testimony of an ordinary witness cannot include his opinions, but only the facts which were apparent to his various senses. What weight the court will give the testimony will depend on his apparent good faith and intelligence and how it is presented.
8. An **expert witness** is one who has been sworn in as such with the supposition and claim that he has particular knowledge about the subject under consideration from extensive study, experience, practice, and observation. Practically anybody who admits to being an expert can be sworn in as an expert witness, but his credibility is open to challenge by the opposition and will depend in final analysis on how well he can convince judge and jury. An expert witness, unlike an ordinary witness, may give opinions on request that will be accepted as evidence. Since he can be repeatedly cross-examined by both sides, sometimes with devastating effect, the expert witness should be careful not to claim to be an expert in too wide a field.
9. The testimony of witnesses should be given without bias and must be absolutely honest. The giving of false testimony is called **perjury** and is punishable by severe penalties.
10. Both health officers and employees may usually keep the **witness fees** they are paid for appearing in court in litigation between two private parties, but employees are supposed to turn such fees over to the city treasurer when the appearance in court took them away from their health department duties. The theory of the witness fee is that it is a partial recompense for the loss of income while in court, and since the full-time health department employee is receiving his regular salary even though in court, he is therefore not entitled to the witness fee. Neither officer nor employee will be entitled to any witness fees in actions involving the health department or when otherwise acting in an official capacity.

Note: When in court, follow the advice of your attorney who represents you or who has asked you to appear as a witness. Every attorney is considered an officer of the court and is supposed to do nothing illegal. The attorney is supposed to protect your rights as a witness against abuse by the opposition. The witness has rights, too, such as not having to say anything which might incriminate him, nor having to listen to abusive language, etc. In a criminal case the prosecution represents the interests of the people, but since you are a public employee in court acting as a prosecution witness he will also give you whatever necessary advice and protection he can.

APPENDIX II (2)

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

NOTICE

MATERIAL REQUIRED IN ANY REQUEST FOR AN ADJUDICATORY HEARING

The Department's "Rules for Adjudicatory Proceedings" require that certain information be submitted as part of any request for an adjudicatory hearing. This information is necessary to ensure that each request for a hearing is handled with speed and efficiency, and that the rights of all parties are protected. Failure to submit all of the necessary data may result in dismissal of the request for a hearing by the Department.

Pursuant to 310 CMR 1.01(6) (b) for the Department of Environmental Quality Engineering the following written information will be required in any request for an adjudicatory hearing concerning an order issued by the Department.

1. A title which indicates the nature of the case, along with name, address and telephone number of the appellant.
2. The address of the activity or facility if differing from that of the appellant.
3. A clear and concise statement that a formal adjudicatory hearing is being requested, including:
 - a. the facts, reasons and citation of the statutory or other law which supports applicant's objections to the decision or action for which the appeal is taken,
 - b. a clear statement of the objections to the ORDER, and
 - c. a statement setting forth the relief sought.
4. The name and address of an attorney or other representative filing the pleading with a signature and date of the signature.
5. A statement under pains and penalties of perjury that copies of notice of claim have been sent simultaneously to all other parties (if any), specifying the mode of service, date, the party to whom sent, the party's address, and the address of service.

Requests for Adjudicatory Hearings must be sent to the Department of Environmental Quality Engineering, Room 1901, 100 Cambridge Street, Boston, MA 02202 with a copy to the Regional Office which issued the ORDER within the time prescribed by the applicable statutes or regulations.

May 1980
VMS

APPENDIX II (4)

MASSACHUSETTS RESOURCE CENTERS

THE ASSOCIATED FOUNDATIONS OF GREATER BOSTON, INC.

294 Washington Street, Boston, MA 01208 Suite 501

Telephone: (617) 426-2608 (first time users are asked to call for an appointment)

Provides: member foundation's annual reports, application guidelines, and tax returns. Also has all Foundation Center publications and source books. IRS tax returns of all Mass. and Conn. foundations.

BOSTON PUBLIC LIBRARY, COPLEY SQUARE

Telephone: (617) 523-5400

Provides: Humanities reference room contains the New England Foundation Collection.

Microtexts: IRS tax returns of all New England foundations.

Government Documents room has information on federal funding.

KIRSTEIN LIBRARY, BUSINESS BRANCH OF THE BPL

20 City Hall Avenue, Boston, MA 02108

Telephone: (617) 523-0860

Provides: Information on corporations, federal funding and individuals.

MASSACHUSETTS ATTORNEY GENERAL'S OFFICE, DIVISION OF PUBLIC CHARITIES

1 Ashburton Place, Boston, MA 02108

Telephone: (617) 727-2235

Provides: Financial information on Massachusetts foundations and charitable trusts.

SPRINGFIELD CITY LIBRARY

220 State Street, Springfield, MA 01103

Telephone: (413) 739-3871

Provides: Information on federal funding. *Foundation Directory*, Attorney General's list. *Directory of Foundations in the Commonwealth of Massachusetts*. *How to Write Successful Foundation Presentations*.

UNIVERSITY LIBRARY, UNIVERSITY OF MASSACHUSETTS/AMHERST

Amherst, Massachusetts

Telephone: (413) 545-0150

Provides: All Foundation Center publications. *Directory of Foundations in the Commonwealth of Massachusetts*. Federal publications on grant writing. Many books on proposal writing.

WORCESTER PUBLIC LIBRARY

Salem Square, Worcester, MA. 01608

Telephone: (617) 752-3751

Provides: All Foundation Center Publications

Federal publications

Directory of the Major Greater Boston Foundations

APPENDIX II (4)

TABLE I
SOURCES OF COMMUNITY INFORMATION

	Demographic characteristics of the community	Community needs and problems	Incidence/Prevalence of health related conditions in the community	Availability/ accessibility of high-quality service	Utilization of/ satisfaction with services	Potential sources of community action & cooperation
Business & industry in the area	X	X				X
Community groups; adult, youth		X		X		
Community health surveys	X	X	X	X	X	
Education institutions	X	X	X			X
Feedback: patients, community		X	X	X	X	
Fire dept., rescue squad, police		X	X	X		
Gov't: local, state, & national	X	X	X	X	X	
Health Care Providers: individual and institutional	X	X	X	X	X	
Insurance companies	X		X	X	X	
Libraries	X		X	X		
Local media	X	X	X	X		
Medical societies and other professional health-related organizations		X	X	X	X	
Private planning organizations	X	X	X	X	X	
Public planning organizations	X	X	X	X	X	
Political organizations	X	X				X
Religious organizations	X	X				X
Utility companies	X					X
Voluntary associations (health & welfare)	X	X	X	X		X

APPENDIX II (4)

TABLE II

FEDERAL PROGRAMS SUBJECT TO HEALTH PLANNING AGENCY REVIEW

Catalog Number	Name of Program	Reviewer- HSA SHCC	Review & Comment	Review & Approve/ Disapprove*
Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA)				
13.235 ...	Drug abuse community service programs (grants & tracts)	x		x
13.237 ...	Mental health-hospital improvement grants	x		x
13.238 ...	Mental health hospital staff development grants	x		x
13.252 ...	Alcohol treatment & rehabilitation- occupational alcoholism services program	x		
13.257 ...	Alcohol formula grants (State plan & appli- cation for allotment grant) Alcohol formula grants (projects funded under allotments)		x	x
13.259 ...	Mental health-children's services	x		x
13.269 ...	Drug abuse prevention formula grants (projects funded under allotments)	x		x
13.275 ...	Drug abuse education programs	x		x
13.290 ...	Special alcoholism projects to implement the Uniform Act	x		x
13.295 ...	Community mental health centers-compre- hensive service support State plan required by sec. 237 CMHC Act	x		x
13.898 ...	Alcoholism demonstration program	x	x	x
13.899 ...	Alcohol abuse & alcoholism prevention demonstration	x		x
13.269 ...	Drug abuse prevention formula grants (State plan & allotment grant)		x	x
Health Resources Administration (HRA)				
13.222 ...	State medical facilities plan and appli- cation for allotment grant (title XVI, PHS Act)		x	x
13.253 ...	Medical facilities construction-loans & loan guarantees Projects funded under allotment (title XVI, PHS Act)	x		x
13.887 ...	Medical facilities construction-project grants	x		x

* Proposed uses of funds under the programs listed above are generally subject to review and approval or disapproval by HSAs, and the federal funding agencies will notify applicants of this. Funding agencies will also, in accordance with 122.406, identify on a case-by-case basis those specific activities in the programs listed above that are not subject to review and approval or disapproval, as well as those specific activities in programs not listed above that are subject to review and approval or disapproval.

Health Services Administration (HSA)

	Comprehensive public health services (projects funded under allotment)	x		x
13.217 ...	Family planning projects	x		x
13.224 ...	Community health centers (includes rural health initiatives & urban health initiatives)	x		x
13.246 ...	Migrant health grants	x		x
13.258 ...	National health service corps	x		x
13.260 ...	Family planning services-training grants & contracts	x		x
13.284 ...	Emergency medical services	x		x
13.292 ...	Sudden infant death syndrome information & counseling program	x		x
13.296 ...	Comprehensive hemophilia diagnostic & treatment centers	x		x
13.823 ...	Health underserved research & demonstration projects	x		x
13.882 ...	Hypertension programs	x		x
13.888 ...	Home health services program	x		x
13.890 ...	Genetic disease counseling & education	x		x
13.211 ...	Crippled children's services (State plan & application for allotment grant)		x	x
13.232 ...	Maternal & child health services (State plan & application for allotment grant)		x	x
	Maternal & infant projects	x		x
	Children & youth projects	x		x

Centers for Disease Control (CDC)

13.210 ...	Comprehensive public health services health incentive formula grants (State plan & application)	x		x
	Comprehensive public health services (projects funded under allotments)	x		x
13.266 ...	Childhood lead-based poisoning projects grants	x		x
13.267 ...	Urban rat control projects grants	x		x
13.268 ...	Childhood immunization grants	x		x
13.288 ...	Centers for Disease Control-investigation, surveillance, & technical assistance (only those programs funded in whole or part under authority of the PHS Act are subject to review)	x		x
13.977 ...	Venereal disease control grants			
13.978 ...	Venereal disease research, demonstration, and public information & education grants	x		x
13.979 ...	Influenza immunization grants			
13.980 ...	Project grants for preventive health services - fluoridation	x		x
	Health Education - grants for Personal Choice Health Behavior (Lifestyle)	x		x

Office of the Assistant Secretary for Health (OASH)

13.256 ...	Health Maintenance Organization development	x		x
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APPENDIX II (4)

TABLE III

MASSACHUSETTS HEALTH SYSTEMS AGENCIES (HSAs) (January 1980)

HSA I	Executive Director Western Mass. Health Planning Council, Inc. 59 Interstate Drive West Springfield, MA 01089	781-2845
HSA II	Executive Director Central Mass. Health Systems Agency, Inc. El Grande, 415 Boston Turnpike Shrewsbury, MA 01545	845-1066
HSA III	Executive Director Merrimack Valley Health Planning Council, Inc. 120 Parker Street Lawrence, MA 01843	686-1621
HSA IV	Executive Director Health Planning Council of Greater Boston, Inc. 294 Washington Street — Suite 630 Boston, MA 02108	426-2022
HSA V	Executive Director Southeastern Mass. Health Planning & Dev. Inc. P.O. Box 70 Middleboro, MA 02346	947-6300
HSA VI	Executive Director North Shore Health Planning Council, Inc. 10 First Avenue Peabody, MA 01960	531-7006
	Director Office of State Health Planning 600 Washington Street — Room 614 Boston, MA 02111	727-4164

APPENDIX II (4)

Your address

Date

Agency name

and address

Dear _____,

It is my understanding that the (name of agency) administers funds for (research grants, training grants, etc.) in the field of (describe your interest area). I am interested in conducting a project to (describe your project). I expect that the project will require (one year, two years) to complete. The tentative starting date is _____.

If you believe this project is eligible under one of your programs, please send the necessary application forms with the appropriate deadlines. I would also appreciate receiving a copy of the regulations for the program, a statement of any priorities you have established, and a description of any other information you need. Finally, if you could place me on your mailing list so that I might receive future announcements on this or other programs administered by your office, I would be most grateful.

If you think this project ineligible or inappropriate for funds from your office, would you please refer me to a more appropriate source.

Thank you for your cooperation and assistance.

Sincerely,

Name

Title

Source: *Model Standards for Community Preventive Health Services*, U.S.D.H.E.W., August, 1979, Surgeon General's Report to Congress, p. 8.

APPENDIX II (5)

Suggested Health Services and Program Statistics

Type of Information	Possible Use
<p>Inspections</p> <ul style="list-style-type: none"> — number of inspections, by category — number of orders for correction of violations, by category — number of housing units, restaurants, groceries, camps, and other "inspectable" units in town 	<p>Evaluate level of inspection activity; determine whether number of violations is extremely high, possibly indicating need for greater public awareness of public health standards; spot problem areas.</p>
<p>Public Health Nursing Service</p> <ul style="list-style-type: none"> — number of visits by disease, age, and source of payment categories — number of patients seen, by disease, age, and source of payment categories — number of visits and number of clients by reason for visit (e.g., health promotion, maternal and child care, communicable disease follow-up, chronic illness, injuries) 	<p>Evaluate level of activity as compared to towns with similar population characteristics; compare reasons for visits with perceived health needs to see if gaps in health services exist; document needs for training programs.</p>
<p>Clinical Services</p> <ul style="list-style-type: none"> — well-child, well-adult clinics (specify whether provided directly by health department or sponsored by department) — number of individual clients attending clinics — number of people attending each clinic — number of positive findings at each clinic; number of new cases identified in screening clinics — number of referrals — outcome of referral — number of other health promotion activities and number of people attending 	<p>Compare with community population to assess how well services are being utilized; could indicate success of publicity efforts. Compare number of positive findings with mortality status to assess effectiveness of screening efforts.</p>
<p>School Health Services (if provided by health department)</p> <ul style="list-style-type: none"> — number of contacts, by type (accidents, sickness, 766 evaluations, health promotion) — immunization records (required) 	<p>Compare amount of time spent on curative versus preventive services. Document need for health aides to do routine work. Document level of immunization.</p>

APPENDIX II(5)

Major Public Health Rates*

Rates	Usual Factor
Rates Whose Denominators Are the Total Population	
Crude birth rate = $\frac{\text{number of live births during the year}}{\text{average (midyear) population}}$	per 1,000 population
Crude death rate = $\frac{\text{number of deaths during the year}}{\text{average (midyear) population}}$	per 1,000 population
Age-specific death rate = $\frac{\text{number of deaths among persons of a given age group in a year}}{\text{average (midyear) population in specified age group}}$	per 1,000 population
Cause-specific death rate = $\frac{\text{number of deaths from a stated cause in a year}}{\text{average (midyear) population}}$	per 100,000 population
Rates and Ratios Whose Denominators Are Live Births	
Infant mortality rate = $\frac{\text{number of deaths in a year of children less than 1 year of age}}{\text{number of live births in same year}}$	per 1,000 live births
Neonatal mortality rate = $\frac{\text{number of deaths in a year of children < 28 days of age}}{\text{number of live births in same year}}$	per 1,000 live births
Fetal death ratio = $\frac{\text{number of fetal deaths** during year}}{\text{number of live births in same year}}$	per 1,000 live births
Maternal (puerperal) mortality rate = $\frac{\text{number of deaths from puerperal causes in a year}}{\text{number of live births in same year}}$	per 100,000 (or 10,000) live births
Rates Whose Denominators Are Live Births and Fetal Deaths	
Fetal death rate = $\frac{\text{number of fetal deaths† during year}}{\text{number of live births and fetal deaths during same year}}$	per 1,000 live births and fetal deaths
Perinatal mortality rate† = $\frac{\text{number of fetal deaths 28 weeks or more and infant deaths under 7 days of age}}{\text{number of live births and fetal deaths 28 weeks or more during the same year}}$	per 1,000 live births and fetal deaths

* From National Center for Health Statistics: Vital Statistics of the United States. Vol. I and II. U.S. Govt. Printing Office, Washington D.C., 1974.

** Includes only fetal deaths for which period of gestation was 20 weeks or more or was not stated.

† This rate is for Perinatal Period I.

‡ Monthly Vital Statistics Report 22:12, U.S. Govt. Printing Office, Washington, D.C., 1974.

APPENDIX II (5)

BOARD OF HEALTH DISPOSITION SCHEDULE

Information and Procedures

1. The following is a list of standard records which can be found in the custody of local Boards of Health and includes those forms currently mandated for their use in carrying out specific statutory responsibilities. Other records widely used supplementary to the performance of these duties are also listed on this schedule.
2. This schedule is arranged alphabetically, first by category (e.g., Board of Health Programs, General, Tuberculosis Records) and, again, by record series title thereunder.
3. Each entry includes a schedule number, record title, statutory reference to the Massachusetts General Laws Annotated (unless otherwise noted), and the minimum period for which the record must be retained. Any record may be retained beyond this time at the discretion of the local board.
4. To destroy records included on this schedule, the board should submit to the Supervisor of Public Records two copies of a letter substantially in the form suggested by the sample shown on the following page, indicating the schedule number and inclusive dates for each type of record to be destroyed. Any record may be retained beyond this time at the discretion of the board. Before submitting destruction requests to this office, PLEASE BE SURE THAT THE PRESCRIBED RETENTION PERIOD HAS FULLY EXPIRED FOR EACH RECORD YOU ARE SEEKING TO DESTROY.
5. To destroy a public record which is presently not included on this schedule, the board should submit a letter, in duplicate, to the Supervisor of Public Records indicating the title and inclusive dates of each item together with alternate sources — if any — of the records and/or information contained therein.
6. For additional information regarding the use of this schedule, please do not hesitate to contact the Division of Public Records, 17th Floor, McCormack State Office Building, One Ashburton Place, Boston, MA 02108 (Telephone 617-727-2832).

SAMPLE LETTER

March 1, 1977

John J. McGlynn, Supervisor
Division of Public Records
17th Floor McCormack Building
One Ashburton Place
Boston, MA 02108

Dear Mr. McGlynn:

This is to request authorization for the destruction of records included on Disposition Schedule DS-7-77 for Boards of Health as follows:

Schedule Number	Inclusive Dates
7.6	January 5, 1976
7.19	January 2, 1973 to February 15, 1974
7.48	January 5, 1969 to February 15, 1970

Very truly yours,

Signature of Legal Custodian

APPROVED:

Date:

Supervisor of Public Records

NOTE

Many records on this schedule under the categories of Board of Health Programs and Tuberculosis Records may fall under the provisions of Chapter 111, section 70, of the Massachusetts General Laws which states:

"Hospitals, or clinics, licensed by the department of public health or supported in whole or in part by the commonwealth shall keep records of the treatment of the cases under their care including the medical history and nurses notes . . . Such records shall be in the possession of the licensee . . . Any such record or any part or portion thereof may be destroyed **thirty years** after the discharge or the final treatment therein of patient to whom it relates."

Though this statute forbids destruction of medical records for a period of thirty years, it places this burden upon the licensee of a hospital or clinic or the operator of a state-supported facility. It is our understanding that local boards formerly "organized" the outpatient services. Since the local boards just had arrangements with independently-licensed hospitals or clinics, section 70 does not apply to the records of the local board of health during such an arrangement. However, if any local board of health was the **licensee** of the hospital or clinic or the **operator** of a hospital or clinic supported in part by the commonwealth, then the records of such a clinic or hospital cannot be destroyed for thirty years. The definition of "medical records" in section 70 is: "records of the treatment of the cases under their care including the medical history and nurses notes."

If a local board is subject to section 70, the records concerning "contacts" and people "notified as having active tuberculosis" can fall under section 70's definition of medical records if these people were under the "care" or "treatment" of the hospital or clinic, or if the records are part of other patients' records which must be retained.

APPENDIX II (5)

NO. TITLE	STATUTORY REFERENCE	RETENTION PERIOD
BOARD OF HEALTH PROGRAMS		
7.1 Direct Patient Care Service, Records of (including Primary Care Center)		30 years
7.2 Immunization, Records of (excluding influenza, see below)		7 years, unless the provisions of C. 111, s. 70 apply (see NOTE)
7.3 Influenza Immunization, Records of		3 years, unless regulated by other statutory requirements
7.4 Screening, Records of (including tuberculosis, lead poison, and other related testing programs)		If tests are negative: After use If tests are positive: 1 year after referral to physician or inactive status
7.5 Well Child Clinic, Records of (including pre-school immunizations)		Retain until child reaches age 21
GENERAL		
7.6 Animal, Notice of Quarantine of Domestic	C. 129, s. 21, 22, 24	1 year (provided copy recorded permanently in Records of Animal Inspector, see 7.8)
7.7 Animal, Certificate of Healthy Condition	C. 129, s. 20	1 year (provided copy recorded permanently in Records of Animal Inspector, see 7.8)
7.8 Animal Inspector, Records of Inspections by	C. 129, s. 25	Permanent
7.9 Food Establishments and Bakeries, Floor Plans for	SSC, Art. X; C. 129, s. 9M	1 year after closing or change of owner (if no litigation pending)
7.10 Burial or Removal Permit (R-309)	C. 114, s. 45, 46	Permanent
7.11 Inspection Reports	C. 94, s. 10C, 16K, 36, 67, 249A, 305C; C. 111, s. 127A-J, 128C; C. 130, s. 81; C. 140, s. 32B; SSC, Art. VI, VII, X	Retain until superseded by a subsequent report
7.12 Building Report – Animal Inspector to Director	C. 129, s. 23	1 year (provided copy recorded permanently in Records of Animal Inspector, see 7.8)
7.13 Annual Report	C. 111, s. 28	After use (provided published copy retained permanently elsewhere)
7.14 Cash Book		Following completion of satisfactory audit

NO. TITLE	STATUTORY REFERENCE	RETENTION PERIOD
7.15 Cemeteries, Approval of Public (including plans thereof)	C. 114, s. 34	Record permanently in Meeting Records
7.16 Communicable Disease, Records of (ledger)	C. 111, s. 113	Permanent
7.17 Communicable Disease, Notice of Carcass infected with	C. 94, s. 146	1 year; record permanently
7.18 Communicable Disease among Animals, Notice of	C. 129, s. 28	1 year; record permanently
7.19 Communicable Disease History Sheet		3 years following inactive status
7.20 Communicable Disease, Weekly Report of Deaths	C. 111, s. 29	1 year; record permanently
7.21 Contracts	C. 40, s. 4	Following termination date of contract (provided copy retained 7 years thereafter by Accountant or City Clerk)
7.22 Licenses and Permits, Applications for	C. 94, s. 10A-C, s. 40, s. 48A, s. 65H, s. 89, s. 118, s. 144, s. 303A,B; C. 111, s. 31A, s. 59 (as amended), s. 155; C. 114, s. 49; C. 140, s. 32A,B,F, s. 51; C. 142, s. 11; SSC, Art. IV, VII, X	1 year after closing or change of owner (if no litigation pending)
7.23 Licenses and Permits Issued, Record of		Permanent
7.24 Licenses and Permits Issued, Stubs for		Following completion of satisfactory audit
7.25 Nuisance, Notice/Order to Abate	C. 111, s. 122 (et seq.)	1 year (if no litigation pending)
7.26 Meeting Records		Permanent
7.27 Occupancy, Certificate of		Retain until next certificate issued
7.28 Payments to Treasurer, Schedule of	C. 41, s. 35	Following completion of satisfactory audit
7.29 Milk Inspector, Records of	C. 94, s. 35	Permanent
7.30 Noisome Trades, Assignment of Place for (approved plan must exist with a letter and map)	C. 111, s. 143	Record Permanently in Meeting Records

NO. TITLE**STATUTORY
REFERENCE****RETENTION PERIOD**

7.31 Rules and Regulations	C. 111, s. 31 (et seq.)	Permanent (One Current Mint Copy)
7.33 Sanitary Landfill, Assignment of plans for		Record permanently in Meeting Records
7.34 Sanitary Landfill, Plan for		Permanent
7.35 Subdivision Plan, Definitive	C. 41, s. 81U	Record permanently in Meeting Records
7.36 Subdivision Plan, Preliminary	C. 41, s. 81S	Record permanently in Meeting Records
7.37 Subdivision Plan, Notice of Approval/Disapproval	C. 41, s. 81S	Same as above
7.38 Subdivision Plan to Planning Board, Report of Definitive	C. 41, s. 81H	Same as above
7.39 Subsurface Sewer Disposal System, Inspection Report records	Environmental Quality Engineering Environmental Code (EQEE) Title V	Permanent or until new system is installed
7.40 Subsurface Sewer Disposal System	EQEE Title V	Same as above
7.41 Slaughter House, Approval of Operation of	C. 111, s. 151	Record permanently in Meeting Records
7.42 Veterans, Affidavit Relative to Burial of	C. 114, s. 46A	1 year

TUBERCULOSIS RECORDS

7.43 Contacts of Living Patients		7 years if the contact is in good health, unless the provisions of C. 111, s. 70 apply (See NOTE)
7.44 Deceased Contacts, Records of		7 years, unless the provisions of C. 111, s. 70 apply
7.45 Deceased Patients, Records of		Same as above
7.46 Index Cards		30 years
7.47 Living Contacts of Deceased Patients, Records of		7 years if the contact is in good health, unless the provisions of C. 111, s. 70 apply
7.48 Reports from Hospitals or Clinics		7 years

APPENDIX II (6)

MEDIA STRATEGY CHART: ADVANTAGES AND LIMITATIONS*

Strategy	Advantages	Limitations
Press Releases (news)	reaches wide circulation through print and electronic media free publicity press coverage lends clout	not good for a limited/small audience may not be best place for reaching target audience time of day (newscast), page article appears on (newspaper), size of article or length of story affect whether audience sees article and its effectiveness
Public Service Announcements (PSAs)	"free ads" on air good tool for public education (counter ads)	often aired at odd hours (low audience; prime-time goes to those who pay) if station produces ad, often done in cheapest way; one person talking, no editing, no slides or music, no film or tape. if you produce PSA it must meet quality standards of station
Calendar Listings	good for reminding people of date, time, place of events	primarily good for event publicity; not for general PR only gives who, what, where, when may not be seen
Interview Shows	free publicity allows you to clarify issues in more in-depth way (½ hour vs. a one minute PSA or short article) provides public forum for your issues allows you to speak for yourselves (represent yourselves) rather than rely on interpretation of reporter	limited audience usually produced cheaply; appeal of "talking heads" limited; many people tune out after a short time
Press Conference	calls attention to a situation useful for announcing findings, publication of facts, results of studies, clarification of an action, making announcements or demands, brings out the press; makes an event out of your news	difficult to find right time of day to hold, so all press can attend and meet that day's deadline difficult to get the press to come unless something very important could be a lot of effort for little return place is crucial

* Adapted from "We Interrupt This Program," p. 17-19.

APPENDIX II (6)

Strategy	Advantages	Limitations
Columns or Regular Features; Article Series	provide in-depth public education on issues provides forum keeps your group/issue in public eye	difficult to convince media to do need enough information to generate several articles weekly deadlines takes lots of person hours takes a lot of research
Brochures, Handouts, Mailers, etc.	direct mail insures you reach intended audience is a tangible reminder for people can be more eye appealing/attention-getting than articles	could be costly often thrown away some people have an antagonism to mailings
Posters	attracts attention additional exposure	need people to post location of poster important (or may not reach audience) cost
Slide-tapes, Video	visual presentation of issues, facts and resources good stimulus for discussion experiential (visually) adds variety and interest	expensive (possibly) need people to present the tape need equipment need people to put it together
Bus Posters	hitting the commuter crowd (and youth/elderly)	cost (about \$1.00 per bus plus printing) limited audience
Event or Action	good chance of getting coverage gets public attention could be entertaining or educational brings issue to the streets or the community allows you personal contact with public creates media follow-up interest and image in community	much planning necessary time-consuming materials may be needed requires pre-publicity

AMHERST

EQUIPMENT LOAN CLOSET

Crutches, hospital-beds, canes, and other equipment is available on loan for the use of Amherst and Pelham residents.

Donations of equipment accepted.

HOW DO YOU PAY FOR SERVICES

Most services are free in that they are tax supported!

For home health care the nurse will discuss fees on the first visit and make adjustments according to income as needed. Those who can afford to pay for services are expected to do so.

The department will seek reimbursements from:

Medicaid
Medicare
Valley Health Plan and other health insurers if clients are eligible.

Services are available to residents of Amherst and Pelham regardless of race, color, creed, national origin or ability to pay

HEALTH DEPARTMENT

"Serving the Town of Amherst Since
1894"



APPENDIX II (6)

BANGS COMMUNITY CENTER
70 Boltwood Walk
Amherst, Mass. 01002

Hours: Monday thru Friday 8 am to 4:30 pm
Telephone: 253-7077

SAMPLE BROCHURE

Amherst Health Department
Bangs Community Center
70 Boltwood Walk
Amherst, Massachusetts 01002

BOARD OF HEALTH

The Amherst Health Department was established in 1894. It shall be the mission of the Amherst Board of Health to promote the health and well-being of residents of all ages in Amherst (and vicinity) by setting policy on health matters and providing direction for the Health Department and its agents.

The basic goals of the Board are:

1. To recommend a program of health related services and activities to:
 - a. Promote positive aspects of individual and social health and to prevent illness.
 - b. Provide selected forms of health care.
 - c. Discharge the legal responsibilities of the Department as defined by local, state, and federal statutes, and,
2. To evaluate the effectiveness of Health Services and activities.

The objectives of these programs are to develop a comprehensive health program for the Town of Amherst by:

1. Creating, supporting and maintaining services designed:
 - a. To prevent disease, illness and disability.
 - b. To provide educational services for the public in individual and community health practices.
 - c. To provide early detection and monitoring of selected disorders.
 - d. To maintain active and responsible environmental surveillance in accordance with legal mandates and in response to local needs.
2. To coordinate in a comprehensive health program various services now offered by other municipal, county, state, and federal agencies, public and private.

PROGRAMS PROVIDED

COMMUNITY HEALTH SERVICES

Tuberculosis Screening (skin-testing) - 3rd Tuesday of each month, 3-4 p.m.

Communicable Disease Investigation and follow-up.

Hypertension Screening for Elderly (see BANGS CENTER LISTING).

Flu Immunization - annually - Oct./Nov., Biological Distribution Site - Local Physicians/clinics/etc.

Cardio-Pulmonary Resuscitation(CPR) - training.

High risk infant follow-up, Maternal Health.

ENVIRONMENTAL HEALTH SERVICES

Monitoring of all food handling operations.

Monitoring operation of Sanitary landfill.

Swimming pool sanitation.

Housing Inspection.

Private sewage disposal design and installation.

Water supply surveillance.

Refuse storage and disposal.

Nuisance investigations.

Distributions of health information regarding environmental concerns.

SCHOOL HEALTH SERVICES

Hearing and vision screening.

Examination for inter-scholastic sports as needed.

Maintaining and providing immunizations and records.

First-aid.

Maintaining an "alert list" of students with special health needs.

Tuberculin screening of school personnel.

Health assessment under Chapter 766.

Consultant in Special Education Programs.

Oral examinations.

Topical Fluoride applications as requested.

Dental Health Education.

HOME HEALTH SERVICES

(Care at Home)

SKILLED NURSING care to evaluate client's needs, set up a home care plan, give care according to doctor's order, do health teaching, make appropriate referrals and coordinate other home services.

PHYSICAL THERAPY to aid in rehabilitation of persons with strokes, fractures, surgical replacement of joints, arthritis, amputation and other disabilities. Rehabilitation is possible with instruction, special exercises and equipment. Also retraining for activities of daily living. Plans made in consultation with family and M.D. Each patient is evaluated and a program designed for their special needs.

HOME HEALTH AIDES work with the direct supervision of the Public Health Nurse. They are able to supplement professional services by assisting with personal care and following prescribed exercise and diet regimens.

Telephone: Home Health Service Only:

Daily: 8:00 a.m. - 4:30 p.m. 253-7077

Evenings: 4:30 p.m. - 9:00 p.m. 253-3277

Weekends and Holidays: 8:00 a.m. - 9:00 p.m. 253-3277

APPENDIX II(9)

COUNTY OFFICES OF EXTENSION SERVICE

Berkshire	Berkshire Co. Extension Service 46 Summer Street Pittsfield, MA 01201	413-448-8285
Franklin	Franklin Co. Extension Service 425 Main Street — Court House Greenfield, MA 01301	413-774-2902
Hampden	Hampden Co. Extension Service 1499 Memorial Ave. W. Springfield, MA 01089	413-736-7204
Hampshire	Hampshire Co. Extension Service 33 King Street Northampton, MA 01060	413-584-2556
Worcester	Worcester Co. Extension Service 36 Harvard Street Worcester, MA 01608	617-753-5477
Middlesex	Middlesex Co. Extension Service 105 Everett Street Concord, MA 01742	617-369-4845
Essex	Essex Co. Extension Service 562 Maple Street Hathorne, MA 01937	617-774-0050
Norfolk	Norfolk Co. Extension Service 460 Main Street Walpole, MA 02081	617-668-0268
Bristol	Bristol Co. Extension Service Center Street Segreganset, MA 02773	617-669-6744
Plymouth	Plymouth Co. Extension Service High Street Hanson, MA 02341	617-293-3541 or 447-5946
Barnstable	Barnstable Deeds & Probate Building Cape Cod Extension Service Barnstable, MA 02630	617-362-2511 ext. 201

APPENDIX II (9)

PESTICIDE COMPLAINT FORM (GENERAL)

Fill out and return to: Lew Wells, Dept. of Food and Agriculture,
100 Cambridge Street, Boston, MA 02202.

1. Your name, address and phone number: _____

2. I have suffered

a. property damage _____
describe loss

b. illness _____
describe illness

3. I wish to complain of an illegal pesticide application:

a. against what applicator (name, company, town, phone #)

b. why was application a problem — describe.

4. Further Comments:

Signature _____

DATE _____

APPENDIX II (9)

ORDER FORM FOR FLIERS FROM U. MASS PESTICIDES PROGRAM (FREE)

Return to:
Roy Van Driesche
Dept. of Entomology
Fernald Hall, U. Mass.
Amherst, MA 01003

Your Name _____

Address: _____

Title	Check those desired
SECTION A: PESTICIDE TOPICS	
1. How to Store your Pesticides	_____
2. Shelf Life of Pesticides	_____
3. What Firemen Should Know About Pesticide Fires	_____
4. Disposal of Pesticides in Mass.	_____
5. Pesticide Safety Tips	_____
6. List of Restricted Use Pesticides	_____
7. What are General Use Pesticides	_____
8. Chemicals for Control of Vertebrates	_____
9. Cholinesterase and the Applicator	_____
10. Addresses & Phone numbers of County Ext. Offices	_____
11. Pesticides and Cancer	_____
12. Effects of Pesticides on Wildlife in Mass.	_____
13. RPAR and Chronic Health Risks of Pesticides	_____
SECTION B: "LEGALITIES"	
1. Use of Pesticides in Mass. (all about licensing and certification)	_____
2. Prices for Training Materials	_____
3. Exam Dates for Certification	_____
4. Summary of Pesticide Laws	_____
5. List of Members of Mass. Pesticide Board	_____
SECTION C: BIOLOGY	
1. Where to Get Insects Identified	_____
2. A List of Reference Books on Insects for the Applicator	_____
3. Home Gardening with Few or No Insecticides	_____

APPENDIX II (9)

RADIATION INFORMATION*

Alpha radiation

consists of positively charged particles and is emitted from naturally occurring elements such as uranium and radium as well as from man-made elements. Alpha radiation will just penetrate the surface of the skin; it can be stopped completely by a sheet of paper. However, the potential hazard that alpha-emitting materials present is due to the possibility of their being taken into the body by inhalation or along with food or water.

Beta radiation

consists of electrons. It is more penetrating than alpha radiation and can pass through 1–2 centimetres of water or human flesh. A sheet of aluminium a few millimetres thick can stop beta radiation. Tritium, one of the materials present in fall-out from nuclear explosives tests, emits beta radiation.

Gamma radiation

can be very penetrating. It can pass right through the human body but would be almost completely absorbed by one metre of concrete. Dense materials such as concrete and lead are often used to provide shielding against gamma radiation.

X-rays

are a more familiar form of penetrating radiation.

Neutrons

can also be very penetrating. They are rarely detected at locations near sea level but are present at greater altitudes. Neutron radiation occurs inside nuclear reactors but

efficient shielding against neutrons can be provided by, for example, water.

WHAT IS MEANT BY RADIATION DOSE?

To be exposed to radiation, i.e. to absorb some radiation energy, is to receive a radiation dose. However, as in the case of coffee, brandy or medicine the possible effects can be best evaluated when the quantity of radiation, the rate at which it was received and the manner in which it was received are known. For example, a single glass of whisky can be drunk and no significant side effects experienced. But what effect would drinking ten glasses have? Among other things, one would need to know whether they were drunk over 20 minutes or 20 days.

Radiation dose to individuals is usually expressed in "rem" (or "millirem", i.e. thousandths of a rem)¹. The rate is then expressed as millirem per hour, per year, etc. As an example, one chest X-ray is equivalent to about 20 millirem.

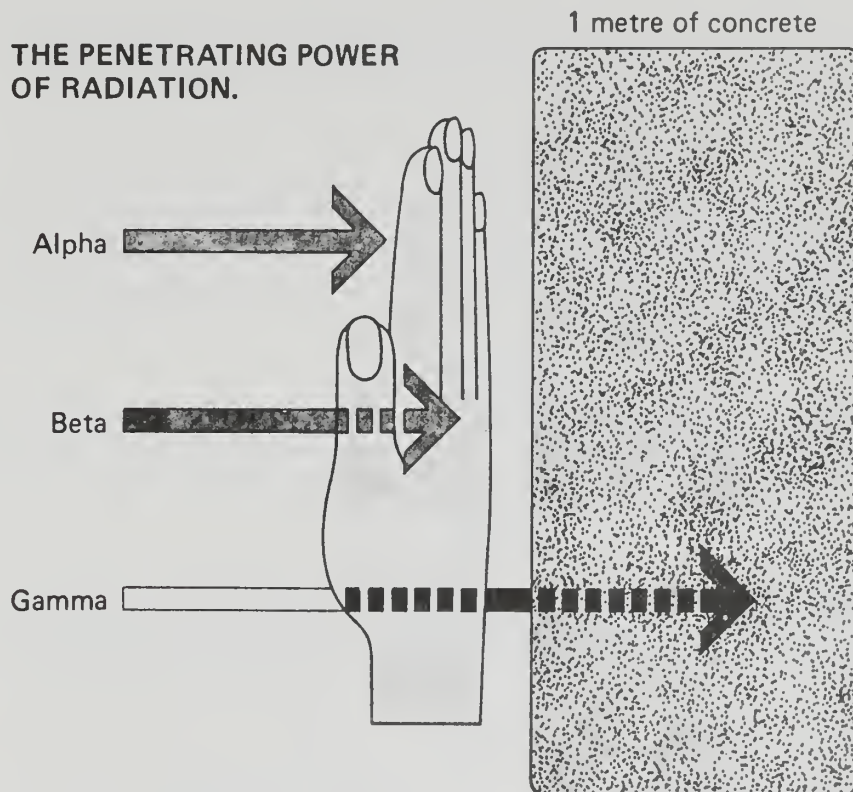
By comparison, the average dose received from other sources of radiation can vary considerably.

¹ More correctly, "millirem" and "rem" refer to the "radiation dose equivalent", and they have been devised to take into account the different biological effects of different types of ionizing radiation on people.

* Source: International Atomic Energy Agency (IAEA).

APPENDIX II (9)

THE PENETRATING POWER OF RADIATION.



TYPES OF RADIATION

Although the term "radiation" is very broad and includes such things as light and radio waves, it is most often used to mean "ionizing" radiation, which is radiation that can produce charged particles ("ions") in materials that it strikes. This is true for inanimate as well as living matter; ionizing radiation then can represent a health hazard to man.

There are various types of ionizing radiation: alpha, beta and gamma radiation, X-rays and neutrons, each with different characteristics. Atoms that emit these kinds of radiation are said to be radioactive.

APPENDIX II(9)

Chapter 508, Acts of 1980, may be distributed as an addendum to be inserted here. Since the chapter modifies sections of the Massachusetts General Laws, Annotated: M.G.L. 21C, M.G.L. 111:150A and M.G.L. 111:150B, M.G.L. 40A:9, M.G.L. 16:19, and M.G.L. 21D (known as the Massachusetts Hazardous Waste Facility Citing Act). Check with the Regional Office of MDPH or DEQE for availability.

APPENDIX II (10)

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING INTERPRETATION OF RESULTS OF WATER SUPPLY ANALYSIS*

Turbidity

The presence of suspended material such as clay, silt, finely divided organic and inorganic matter, plankton, and other micro-organisms in water is known as turbidity. Light is scattered or absorbed by this suspended matter resulting in loss of clarity. Bacteria may hide in this suspended matter and may even survive disinfection. The maximum contaminant level is **1.0 turbidity unit** for surface water sources (see Regulations).

Sediment

Any organic or inorganic material that settles to the bottom of the container is referred to as sediment. The range is from 0 (no sediment) to 5 (indicating a heavy sediment layer). High levels of sediment are objectionable for esthetic reasons.

Color

Dissolved organic material from decaying vegetation and certain inorganic matter cause color in water. Excessive blooms of algae or other micro-organisms may also impart color. While not usually detrimental from a health standpoint, excessive color is esthetically objectionable. A color of **15 units** is the recommended limit.

Odor

Odor in water can be caused by foreign matter such as organic compounds, inorganic salts, or dissolved gases. These materials are derived from industrial, domestic, agricultural, or natural sources. Acceptable waters should be free of any objectionable odor. An **odor threshold of 3** is the recommended limit.

pH

pH is a measure of the hydrogen ion (H^+) concentration in water. Values range from 0 to 14. A value of 7 indicates neutral water; values less than 7, increasing acidity; and values greater than 7 indicate increasing alkalinity. The pH of water often varies from 4.0 to 9.0. Determination of pH assists in the control of corrosion and in adequate control of disinfection.

Alkalinity

The alkalinity of water is a measure of its ability to neutralize a strong acid. Alkalinity is imparted to water by bicarbonate (HCO_3), carbonate (CO_3), and/or hydroxide (OH). The presence of these compounds is determined by standard methods involving titration with a strong acid using various indicator solutions. The results are reported as milligrams of calcium carbonate ($CaCO_3$) per liter of water. A water with low pH and low alkalinity might be considered to be corrosive. An alkalinity of less than 100 milligrams per liter is desirable for water used for domestic purposes.

* Testing of water samples must be done by a laboratory certified by DEQE. Consult the Drinking Water Regulations of Massachusetts (310 CMR 22.00) for reporting and monitoring requirements for community and non-community public water supplies, or contact DEQE Division of Water Supply.

Hardness

Hard water and soft water are relative terms. Hard water retards the cleaning action of soaps and detergents. Hardness is caused chiefly by calcium and magnesium ions, and it is expressed as milligrams of calcium carbonate (CaCO_3) per liter of water. Hardness may vary from zero to several hundred milligrams per liter. Small concentrations of hardness help combat corrosion of metallic pipes by forming a protective coating. Appreciable amounts of hardness break down on heating to form scale in boilers and on cooking utensils. Water showing a hardness of less than 50 mg/l is relatively soft; 50 – 100 milligrams per liter is medium hard, and over 100 milligrams is exceedingly hard. Very soft water, usually less than 30 milligrams per liter of hardness, is likely to be corrosive.

Calcium (Ca)

The presence of calcium (fifth among the elements in order of abundance) in water supplies results from water passing through or over limestone and/or calcium-containing mineral deposits. The calcium content may range from zero to several hundred milligrams per liter. Calcium contributes to water hardness; chemical softening or ion exchange is used to reduce calcium and the associated hardness.

Magnesium (Mg)

Magnesium ranks eighth among the elements in order of abundance and is a common constituent of natural water. It is an important contributor to water hardness, and is reduced with chemical softening or ion exchange. Concentrations greater than 125 milligrams per liter of water can exert a cathartic and diuretic action.

Sodium (Na)

Sodium ranks sixth among the elements in order of abundance; therefore, it is present in most natural waters. Its level may vary from negligible to appreciable. High concentrations may result from local use of road salt or from water softeners utilizing sodium ion exchange. As recommended by the American Heart Association, persons on low sodium diets should be warned when the sodium level exceeds **20 milligrams** per liter of water.

Potassium (K)

Potassium ranks seventh among the elements in order of abundance, but its concentration in drinking water seldom reaches 20 milligrams per liter of water. Potassium and sodium are closely related alkali metals, and they affect the body in much the same way.

Iron (Fe)

Small amounts of iron are frequently present in water because of the large amount of iron present in soil and because corrosive water will pick up iron from cast iron pipes. The presence of high levels is considered objectionable because it stains laundry and porcelain, and it also affects the taste of beverages. The recommended limit for iron is **0.3 milligrams** per liter of water.

Manganese (Mn)

Although rarely present in excess of one milligram per liter, manganese imparts tenacious stains to laundry and to plumbing fixtures. A limit of **0.05 milligrams** manganese per liter is recommended.

Silica (SiO_2)

Silica exists in the earth's crust as the oxide in many rocks and combined with metals in the form of many silicate minerals. Degradation of these silica-containing rocks results in the presence of silica in natural waters as suspended particles and as the silicate ion. The silica content of natural water is most commonly in the 1 to 30 milligrams per liter range, although concentrations as high as 100 milligrams per liter are not unusual.

Sulfate (SO_4)

Sulfate is widely distributed in nature and may be present in natural waters in concentrations ranging from a few to several thousand milligrams per liter. Because of the laxative effects of magnesium sulfate (Epsom salts) and/or sodium sulfate (Glauber's salt), sulfate content should not exceed **250 milligrams** per liter of water.

Chloride (Cl)

Most waters contain some chloride in solution. Chloride concentrations in excess of **250 milligrams** per liter of water usually impart a salty taste and are not recommended. An abrupt increase in chloride content in water may indicate possible pollution from sewage sources or from road salting.

Specific Conductance

Specific conductance is a measure in micromhos per centimeter ($\mu\text{mhos/cm}$) of a water's ability to carry an electric current. This ability increases as the dissolved mineral content of the water increases. Pure distilled water has a specific conductance of 0.5 to 2.0 $\mu\text{mhos/cm}$. Most potable waters generally range from 50 to 1,500 $\mu\text{mhos/cm}$.

Nitrogen (Ammonia)

Ammonia nitrogen is naturally present in surface and ground waters. A product of microbiological activity, ammonia nitrogen is sometimes accepted as evidence of pollution when encountered in untreated surface supplies. Its occurrence in groundwater supplies is quite general however, and is found in small concentrations. It is recommended that the ammonia nitrogen (as N) level not exceed **0.050 milligrams** per liter of drinking water.

Nitrogen (Nitrate)

Nitrate nitrogen in drinking water above the standard poses an immediate threat to children under three months of age. In some infants, excessive levels of nitrate have been known to react with the hemoglobin in the blood to produce an anemic condition commonly known as "blue baby". If the drinking water contains an excessive amount of nitrate, it should not be given to infants under three months of age and not used to prepare formula. The standard allows for **10.0 milligrams** of nitrate (as N) per liter of water.

Nitrogen (Nitrite)

Nitrite nitrogen in concentrations greater than 1.0 milligrams per liter is hazardous to infants. The recommended limit is **0.001 milligrams** nitrite nitrogen (as N) per liter of water.

Copper (Cu)

Copper is found in some natural waters. Excessive amounts of copper can occur in corrosive water that passes through copper pipes, and stain porcelain fixtures. Copper in small amounts is not detrimental to health; however, higher amounts will impart an undesirable taste to the drinking water. For this reason, the recommended limit is **1.0 milligram** copper per liter of water.

MAXIMUM MICROBIOLOGICAL CONTAMINANT LEVELS AND MONITORING REQUIREMENTS

Contaminant	Maximum Contaminant Level	Monitoring Frequency Non-Community Water Systems
Membrane Filter		
Coliform Bacteria	(a) One per 100 milliliters as the arithmetic mean of all samples examined per month; or	Beginning June 24, 1979 as specified by the Department, but no less than one each calendar quarter during which the system provides water to the public
	(b) Four per 100 milliliters in more than one sample when less than 20 are examined per month; or	
	(c) Four per 100 milliliters in more than five percent of the samples when 20 or more are examined per month.	
Fermentation Tube		
	(a) More than 10 percent of the portions in any month; or	
	(b) Three or more portions in more than one sample when less than 20 samples are examined per month; or	
	(c) Three or more portions in more than five percent of the samples when 20 or more samples are examined per month.	
Population served:		Minimum number of samples per month
25 to 1,000		1
1,001 to 2,500		2
2,501 to 3,300		3
3,301 to 4,100		4
4,101 to 4,900		5

INTERPRETATION OF RESULTS OF CHEMICAL EXAMINATION OF WATER

Arsenic (As)

This element occurs naturally in the environment, especially in the western United States, and it is also used in insecticides. It is found in tobacco, shellfish, drinking water, and in the air in some locations. The standard allows for **0.05 milligrams** of arsenic per liter of water. If persons drink water that continuously exceeds the standard by a substantial amount over a lifetime, they may suffer from fatigue and loss of energy. Extremely high levels can cause poisoning.

Barium (Ba)

Although not as widespread as arsenic, this element also occurs naturally in the environment in some areas. It can also enter water supplies through industrial waste discharges. Small doses of barium are not harmful. However, it is quite dangerous when consumed in large quantities. The maximum amount of barium allowed in drinking water by the standard is **1.0 milligram** per liter of water.

Cadmium (Cd)

Only minute amounts of this element are found in natural waters in the United States. Waste discharges from the electroplating, photography, insecticide, and metallurgy industries can increase cadmium levels, however. The most common source of cadmium in our drinking water is from galvanized pipes and fixtures. But the main sources of cadmium exposure are the foods we eat and cigarette smoking. The maximum amount of cadmium allowed in drinking water by the standard is **0.010 milligrams** per liter of water.

Chromium (Cr⁺⁶)

This metal is found in cigarettes, some of our foods, and the air. Some studies suggest that in minute amounts, chromium may be essential to human beings, but this has not been proven. The standard for chromium is **0.05 milligrams** per liter of water.

Lead (Pb)

This metal is found in the air and in our food. It comes from lead and galvanized pipes, auto exhausts, and other sources. The maximum amount of lead permitted in drinking water by the standards is **0.05 milligrams** per liter of water. Excessive amounts well above this standard may result in nervous system disorders or brain or kidney damage.

Mercury (Hg)

Mercury is found naturally throughout the environment. Large increases in mercury levels in water can be caused by industrial and agricultural use. The health risk from mercury is greater from mercury in fish than simply from water-borne mercury. Mercury poisoning may be acute, in large doses, or chronic, from lower doses taken over an extended time period. The maximum amount of mercury allowed in drinking water by the standard is **0.002 milligrams** per liter of water. That level is 13 percent of the total allowable daily dietary intake of mercury.

Selenium (Se)

This mineral occurs naturally in soil and plants, especially in western states. It is found in meat and other foods. Although it is believed to be essential in the diet, there are indications that excessive amounts of selenium may be toxic. Studies are underway to determine the amount required for good nutrition and the amount that may be harmful. The standard for selenium is **0.01 milligrams** per liter of water. If selenium came only from drinking water, it would take an amount many times greater than the standard to produce any ill effects.

Silver (Ag)

Silver is sometimes used in disinfecting drinking water but this metal should not pose any problem in this area. Because of the evidence that silver, once absorbed, is held indefinitely in tissues, particularly the skin, without evident loss through usual channels of elimination or reduction by transmigration to other body sites; and because of other factors, the maximum amount of silver allowed in drinking water by the standard is **0.05 milligrams** per liter of water.

Fluoride

This is a natural mineral and all drinking water contains some fluoride. High levels of fluoride in drinking water can cause brown spots on the teeth, or mottling, in children up to 12 years of age. Adults can tolerate ten times more than children. In the proper amounts, however, fluoride in drinking water prevents cavities during formative years. This is why many communities add fluoride in controlled amounts to their water supply. The maximum amount of fluoride allowed in drinking water by the standard ranges from **0.4 milligrams per liter of water to 2.4 milligrams**, depending on the average maximum daily air temperature. The hotter the climate, the lower the amount allowed, for people tend to drink more in hot climates. In this area, the maximum contaminant level for fluoride is **2.0 milligrams** per liter of water.

Nitrate

Nitrate in drinking water above the standard poses an immediate threat to children under three months of age. In some infants, excessive levels of nitrate have been known to react with the hemoglobin in the blood to produce an anemic condition commonly known as "blue baby". If the drinking water contains an excessive amount of nitrate, it should not be given to infants under three months of age and not to be used to prepare formula. The standard allows for **10.0 milligrams** of nitrate (as N) per liter of water.

Pesticides

Millions of pounds of pesticides are used on croplands, forests, lawns, and gardens in the United States each year. They drain off into surface waters or seep into underground water supplies. Many of them may pose health problems if they get into drinking water and the water is not properly treated. The maximum limits for pesticides in drinking water are:

Endrin, **0.0002 milligrams** per liter
Lindane, **0.004 milligrams** per liter
Methoxychlor, **0.1 milligrams** per liter
Toxaphene, **0.005 milligrams** per liter
2,4-D, **0.1 milligrams** per liter
2,4,5-TP Silvex, **0.01 milligrams** per liter

Radioactivity

Radioactivity is the only contaminant for which standards have been set that has been shown to cause cancer. However, the exposure to radiation in drinking water is only a fraction of the exposure from all natural sources. The main source of radioactive material in surface water is nuclear bomb testing. Other sources could be nuclear power plants and uranium mines. Alpha and radium radioactivity occur naturally in parts of the west, mid-west and northeast in ground water. Standards for those types of radioactivity and for man-made, or beta, radiation have been set at levels of safety comparable to other contaminants.

Mass and Volume Conversions

1 Liter = 1.057 Quarts
1 Milligram = 0.001 Gram
1 Gram = 0.035 Ounce
1 Milligram per Liter (mg/l) = 1 Part Per Million (ppm)

APPENDIX II(11)

BENCHMARK AIR QUALITY LEVELS — 1976 *

1. **Particulate Matter:** Total Suspended Particulate (TSP)
Inhalable Particulate Matter (IPM)
 - Gross Quantity, annual U.S. 13.4 million metric tons
 - Major 'point' sources:
 - mineral production 28%
 - electric power generation 18%
 - industrial fuel use 10%
 - primary metals production 9%
 - National 'average' concentration $62 \mu\text{g}/\text{m}^3$
 - 20 Air Quality Control Regions located
 - N.E. of Tennessee—Chicago ann. ave. max. $109 \mu\text{g}/\text{m}^3$
 - Note. IPM is the particulate fraction that is less than 15 μ m diameter and more likely to penetrate into the deep lung. TSP includes relatively large inert particles.
2. **Sulfur Oxides. SO**
 - Gross Quantity, annual U.S. 27 million metric tons
 - Major 'point' sources:
 - electric power generation 54%
 - primary metals production 11%
 - industrial fuel use 11%
 - Primary annual standard $80 \mu\text{g}/\text{m}^3$
 - within some regions in Northeast,
 - may exceed $160 \text{ g}/\text{m}^3$
 - Note. High sulfur content of fuels available in Northeast.
3. **Nitrogen Oxides. NO**
 - Gross Quantity, annual U.S. 23 million metric tons
 - Major 'point' sources, 57%
 - electric power generation 25%
 - petroleum industries 10%
 - Major 'area' sources, 43%
 - transportation vehicles 36%
 - Annual nitrogen dioxide standard, U.S. $100 \mu\text{g}/\text{m}^3$
 - Note. Only 4 AQCRs exceeded this standard in 1976.
4. **Carbon Monoxide. CO**
 - Gross Quantity, annual U.S. 87 million metric tons
 - Major 'area' source
 - transportation vehicles 76%
 - The 8-hour standard, U.S. $10 \text{ mg}/\text{m}^3$
 - Before the introduction of the catalyst on the 1975 automotive model year, this standard was exceeded at almost all major urban locations.
Note that $10 \text{ mg}/\text{m}^3 = 10,000 \text{ g}/\text{m}^3$.

* Mage, D.T. The Nature of Air Pollution in the United States.
U.S. EPA. Research Summary — Acid Rain. Oct. 1979.

5. Photochemical Oxidants/Ozone.

- Gross Quantity, annual U.S. 1976 28 million metric tons.
- Major 'area' source
 transportation vehicles 50%
- The one-hour standard, U.S. $160 \mu\text{g}/\text{m}^3$
- Of the 273 monitoring sites, U.S. 1976, 75% exceeded this standard.
- Note. Photo. Oxidants are produced through photochemical reaction of hydrocarabons and nitrogen oxides.

6. Acid Rain

- Gross Quantity, sulfur and nitrogen oxides. 50 million metric tons.
- Point and area sources
- Long-term shift in pH of Adirondack Lakes from 6.5 in '30s to 4.7 in 1975.
- Environmental damage to monuments and statuary, to forests and crops.
- Combustion of sulfur-containing fuels, particularly coal, is due to increase.
- Standards, methods for removal of sulfur, and methods of reducing quantities of contributing pollutants are currently being researched by EPA.

APPENDIX II (11)

NOISE AND ITS MEASUREMENT

The damage done by the pollution of our air and water is widely recognized. The evidence is right before our eyes, in contaminated water, oil spills and dying fish, and in smog that burns the eyes and sears the lungs.

Noise is a more subtle pollutant. Aside from sonic booms that can break windows, noise usually leaves no visible evidence, although it also can pose a hazard to our health and well-being. An estimated 14.7 million Americans are exposed to noise that poses a threat to their hearing on the job. Another 13.5 million of us are exposed to dangerous noise levels without knowing it from trucks, airplanes, motorcycles, hi-fi's, lawnmowers, and kitchen appliances.

Recent scientific evidence shows that **relatively continuous exposures** to sound **exceeding 70 decibels** — expressway traffic, for instance — **can be harmful to hearing**. More than that, noise can cause temporary stress reaction which includes increases in heart rate, blood pressure, blood cholesterol levels and effects in the digestive and respiratory systems. With persistent, unrelenting noise exposure, it is possible that these reactions become chronic stress diseases such as high blood pressure or ulcers.

Knowing the damage that noise is doing, what can we do about reducing it?

First we must identify the noise source and measure its output. Accurate analysis and measurement are the first steps in controlling noise.

What Is Sound?

Sound travels in waves through the air like waves through water. The higher the wave, the greater its power. The greater the number of waves a sound has, the greater is its frequency or pitch.

The strength of sound, or sound level, is measured in decibels (dB). The frequency is measured in Hertz (Hz) (cycles per second). However, the human ear does not hear all frequencies. Our normal hearing ranges from 20 Hz to 20,000 Hz or, roughly, from the lowest note on a great pipe organ to the highest note on a violin.

The human ear also does not hear all sounds equally. Very low and very high notes sound more faint to our ear than 1000 Hz sounds of equal strength. This is the way our ears function.

The human voice in conversation covers a median range of 300 to 4000 Hz. The musical scale ranges from 30 to 4000 Hz.

Noise in these ranges sounds much louder to us than very low or very high-pitched noises of equal strength.

Loudness and Decibels

Because hearing also varies widely between individuals, what may seem loud to one person may not to another. Although loudness is a personal judgement, precise measurement of sound is made possible by use of the decibel scale. This scale, shown below, measures sound pressure or energy according to international standards.

Sound Levels and Human Response *

Common Sounds	Noise Level (dB)	Effect
Carrier deck jet operation Air raid siren	140	<i>Painfully loud</i>
	130	
Jet takeoff (200 feet) Thunderclap Discotheque Auto horn (3 feet)	120	<i>Maximum vocal effort</i>
Pile drivers	110	
Garbage truck	100	
City traffic	90	<i>Very annoying Hearing damage (8 hours)</i>
Alarm clock (2 feet) Hair dryer	80	<i>Annoying</i>
Noisy restaurant Freeway traffic Man's voice (3 feet)	70	<i>Telephone use difficult</i>
Air conditioning unit (20 feet)	60	<i>Intrusive</i>
Light auto traffic (100 feet)	50	<i>Quiet</i>
Living room Bedroom Quiet office	40	
Library Soft whisper (15 feet)	30	<i>Very quiet</i>
Broadcasting studio	20	
	10	<i>Just audible</i>
	0	<i>Hearing begins</i>

* This decibel (dB) table compares some common sounds and shows how they rank in potential harm to hearing. Note that 70 dB is the point at which noise begins to harm hearing. To the ear, each 10 dB increase seems twice as loud.

APPENDIX II(11)

SOUND LEVELS OF SOME NOISES FOUND IN DIFFERENT ENVIRONMENTS*

Overall Level dBA (SPL re 0.0002 Microbar)	Industrial (& Military)	Community (or Outdoor)	Home (or Indoor)
— 130 — UNCOMFORTABLY LOUD	Diesel Engine Room (125 dB) Armored Personnel Carrier (123 dB) Oxygen Torch (121 dB)	50 hp Siren (100 feet) (125 dB) Thunderclap overhead (120 dB) Jet Plane (at ramp) (117 dB)	
— 120 —	Scraper-Loader (117 dB) Compactor (116 dB)		Rock-N-Roll Band (108-114 dB)
— 110 —	Riveting Machine (110 dB) Textile Loom (106 dB)	Jet Flyover @ 1000 Ft (103 dB)	
— 100 — VERY LOUD	Electric Furnace Area (100 dB) Farm Tractor (98 dB)	Power Mower (96 dB) Compressor @ 20 Ft (94 dB)	Inside Subway Car - 35 MPH (95 dB)
— 90 —	Newspaper Press (97 dB)	Rock Drill @ 100 Ft (92 dB)	Cockpit-Light Aircraft (90 dB)
— 80 — MODERATELY	Cockpit-Prop Aircraft (88 dB) Milling Machine (85 dB)	Motorcycles @ 25 ft (90 dB) Propeller Aircraft Flyover @ 1000 Ft (88 dB)	Shouted Conversation (90 dB) Food Blender (88 dB)
— 70 — LOUD	Cotton Spinning (83 dB) Lathe (81 dB)	Diesel Truck 40 MPH @ 50 Ft (84 dB)	Garbage Disposal (80 dB)Clothes Washer (78 dB)
— 60 —	Tabulating (80 dB)	Diesel Train, 40-50 MPH @ 100 Ft (83 dB)	Living Room Music (76 dB) Dishwasher (75 dB)
— 50 — QUIET		Passenger Car, 65 MPH @ 25 Ft (77 dB)	TV-Audio (70 dB) Vacuum (70 dB)
— 40 —		Near Freeway-Auto Traffic (64 dB)	Normal Conversation (50-60 dB)
— 30 — VERY QUIET		Air Conditioning Unit @ 20 Ft (60 dB)	
— 20 — JUST		Large Transformer @ 200 Ft. (58 dB)	
— 10 — AUDIBLE		Light Traffic @ 100 Ft (50 dB)	
— 0 — THRESHOLD OF HEARING (1000-4000 Hz)		Rustling Leaves (20 dB)	

NOTE Unless otherwise specified, listed sound levels are measured at typical operator-listener distances from source. Readings taken from acoustical literature and adopted from Table 1 (p. 45) of *Environmental Health Planning Guide*, U.S. Department of Health, Education and Welfare (1971).

* Source: Bell, J.A. Physician's Guide to Noise Pollution. Department of Environmental, Public, and Occupational Health, American Medical Association. 1973



APPENDIX II (14)

The Commonwealth of Massachusetts
Department of Public Health

TELEPHONE _____

Address _____ Occupant _____
Floor _____ Apartment No. _____ No. Occupants _____
No. of Habitable Rooms _____ No. Sleeping Rooms _____
No. dwelling or rooming units _____ No. Stories _____
Name and address of owner _____

	Remarks	Reg.	Vio.
YARD	Out Bldgs. Fences:		
	Garbage and Rubbish:		
	Containers:		
	Drainage		
	Infestation Rats or other:		
STRUCTURE EXT.	Steps, Stairs, Porches:		
<input type="checkbox"/> B <input type="checkbox"/> F <input type="checkbox"/> M	Dual Egress: and Obst'n:		
	Doors, Windows:		
	Roof		
	Gutters, Drains:		
	Walls:		
	Foundation:		
	Chimney:		
BASEMENT	Gen. Sanitation:		
	Dampness:		
	Stairs:		
	Lighting:		
STRUCTURE INT.	Hall, Stairway:		
	Obst'n:		
	Hall, Floor, Wall, Ceiling:		
	Hall Lighting:		
	Hall Windows:		
HEATING	Chimneys:		
Central <input type="checkbox"/> Y <input type="checkbox"/> N	Equip. Repair		
TYPE:	Stacks, Flues, Vents:		
PLUMBING:	Supply Line:		
<input type="checkbox"/> MS <input type="checkbox"/> ST <input type="checkbox"/> P	Waste Line:		
	H W Tank(s) Safety and Vent(s)		
ELECTRICAL	Panels, Meters, Cir.:		
<input type="checkbox"/> 110 <input type="checkbox"/> 220	Fusing, Grnd.:		
AMP:	Gen. Cond. Distrib. Box:		
	Gen. Basement Wiring:		
	DWELLING UNIT		
	Ventil. Lgtng. Outlets Walls Ceils Wind Doors Floors Locks		
Kitchen			
Bathroom			
Pantry			
Den			
Living Room			
Bedroom (1)			
Bedroom (2)			
Bedroom (3)			
Bedroom (4)			
Hot Water Facil.	Sup Ten Gas, Oil, Elect:		
	Stacks, Flues, Vents, Safeties		
Kitchen Facilities	Sink		
	Stove		
Bathing, Toilet Facil.	Vent., Plumb., Sanit'n.		
	Wash Basin, Shower or Tub:		
Infestation	Rats Mice, Roaches or Other:		
Egress	Dual and Obst'n:		
General	Building Posted:		
	Locks on doors:		

ONE OR MORE OF THE VIOLATIONS CHECKED ABOVE IS A CONDITION WHICH MAY MATERIALLY IMPAIR THE HEALTH OR SAFETY AND WELL-BEING OF THE OCCUPANT AS DETERMINED BY 105CMR 410.750 OF THE CODE OR THE AUTHORIZED INSPECTOR. (See Over)

INSPECTOR _____

TITLE _____

DATE _____

TIME _____

THE NEXT SCHEDULED REINSPECTION _____

11.37.

410.750: Conditions Deemed to Endanger or Impair Health or Safety

The following conditions, when found to exist in residential premises, shall be deemed conditions which may endanger or impair the health, or safety and well-being of a person or persons occupying the premises. This listing is composed of these items which are deemed to always have the potential to endanger or materially impair the health or safety, and well-being of the occupants or the public. Because Chapter II, 105 CMR 410.000 through 410.499 state minimum requirements of fitness for human habitation, any violation has the potential to fall within this category in any given situation but may not do so in every case and therefore cannot be included in this listing. Failure to include shall in no way be construed as a determination that other violations may not be found to fall within this category. Nor shall failure to include affect the duty of the local health official to order repair or correction of the violation(s) pursuant to 410 CMR 410.830 through 410.833 nor shall it affect the legal obligation of the person to whom the order is issued to comply with such order.

(A) Failure to provide a supply of water sufficient in quantity, pressure and temperature, both hot and cold, to meet the ordinary needs of the occupant in accordance with 105 CMR 410.180 and 410.190 for a period of 24 hours or longer.

(B) Failure to provide heat as required by 105 CMR 410.201 or improper venting or use of a space heater or water heater as prohibited by 105 CMR 410.200(B) and 410.202.

(C) Shut-off and/or failure to restore electricity or gas.

(D) Failure to supply the electrical facilities required by 105 CMR 410.250(B), 410.251(A), 410.253(A), 410.253(B) and the lighting in common area required by 105 CMR 410.254.

(E) Failure to provide a safe supply of water.

(F) Failure to provide a toilet and maintain a sewage system in operable condition as required by 105 CMR 410.150(A)(1) and 410.100.

(G) Failure to provide adequate exits, or the obstruction of any exit, passageway or common area caused by an object, including garbage or trash, which prevents egress in case of an emergency 105 CMR 410.450 and 410.451.

(H) Failure to comply with the security requirements of 105 CMR 410.480(D).

(I) Failure to comply with any provisions of 105 CMR 410.600 through 410.602 which results in any accumulation of garbage, rubbish, filth or other causes of sickness which may provide a food source or harborage for rodents, insects or other pests or otherwise contribute to accidents or to the creation or spread of disease.

(J) The presence of lead-based paint on a dwelling or dwelling unit in violation of the Massachusetts Department of Public Health Regulations for Lead Poisoning Prevention and Control 105 CMR 460.000.

(K) Roof, foundation, or other structural defects that may expose the occupant or anyone else to fire, burns, shock, accident or other dangers or impairment to health or safety.

(L) Failure to install electrical, plumbing, heating and gas-burning facilities in accordance with accepted plumbing, heating, gas-fitting and electrical wiring standards or failure to maintain such facilities as are required by 105 CMR 410.351 and 410.352 so as to expose the occupant or anyone else to fire, burns, shock, accident or other danger or impairment to health or safety.

(M) Any of the following conditions which remain uncorrected for a period of five or more days following the notice to or knowledge of the owner of said condition or conditions:

- (1) lack of a kitchen sink of sufficient size and capacity for washing dishes and kitchen utensils or lack of a stove and oven or any defect that renders either operable.
- (2) failure to provide a washbasin and a shower or bathtub as required in 105 CMR 410.150(A)(2) and 410.150(A)(3) and any defect which renders them inoperable.
- (3) any defect in the electrical, plumbing, or heating system which makes such system or any part thereof in violation of generally accepted plumbing, heating, gas-fitting, or electrical wiring standards that do not create an immediate hazard.
- (4) failure to maintain a safe handrail or protective railing for every stairway, porch balcony, roof or similar place as required by 105 CMR 410.503(A) and 410.503(B).
- (5) failure to eliminate rodents, cockroaches, insect infestations and other pests as required by 105 CMR 410.550.

(N) Any other violation of Chapter II not enumerated in 105 CMR 410.750(A) through (M) shall be deemed to be a condition which may endanger or materially impair the health or safety and well-being of an occupant upon the failure of the owner to remedy said condition within the time so ordered by the board of health.

APPENDIX II (14)

Legal Remedies for Tenants of Residential Housing

THE FOLLOWING IS A BRIEF SUMMARY OF SOME OF THE LEGAL REMEDIES TENANTS MAY USE IN ORDER TO GET HOUSING CODE VIOLATIONS CORRECTED.

1. Rent Withholding (General Laws Chapter 239 Section 8A)

If Code Violations Are Not Being Corrected you may be entitled to hold back your rent payments. You can do this without being evicted if:

- A. You can prove that your dwelling unit or common areas contain code violations which are serious enough to endanger or materially impair your health or safety and that your landlord knew about the violations before you were behind in your rent.
- B. You did not cause the violations and they can be repaired while you continue to live in the building.
- C. You are prepared to pay any portion of the rent into court if a judge orders you to pay it. (For this it is best to put the rent money aside in a safe place.)

2. Repair and Deduct (General Laws Chapter 111 Section 127L).

The law sometimes allows you to use your rent money to make the repairs yourself. If your local code enforcement agency certifies that there are code violations which endanger or materially impair your health, safety or well-being and your landlord has received written notice of the violations, you may be able to use this remedy. If the owner fails to begin necessary repairs (or to enter into a written contract to have them made) within five days after notice or to complete repairs within 14 days after notice you can use up to four months' rent in any year to make the repairs.

3. Retaliatory Rent Increases or Evictions Prohibited (General Laws Chapter 186, Section 18 and Chapter 239 Section 2A).

The owner may not increase your rent or evict you in retaliation for making a complaint to your local code enforcement agency about code violations. If the owner raises your rent or tries to evict within six months after you have made the complaint he or she will have to show a good reason for the increase or eviction which is unrelated to your complaint. You may be able to sue the landlord for damages if he or she tries this.

4. Rent Receivership (General Laws Chapter 111 Sections 127C-H).

The occupants and/or the board of health may petition the District or Superior Court to allow rent to be paid into court rather than to the owner. The court may then appoint a "receiver" who may spend as much of the rent money as is needed to correct the violation. The receiver is not subject to a spending limitation of four months' rent.

5. Breach of Warranty of Habitability.

You may be entitled to sue your landlord to have all or some of your rent returned if your dwelling unit does not meet minimum standards of habitability.

6. Unfair and Deceptive Practices (General Laws Chapter 93A).

Renting an apartment with code violations is a violation of the consumer protection act and regulations for which you may sue an owner.

THE INFORMATION PRESENTED ABOVE IS ONLY A SUMMARY OF THE LAW, BEFORE YOU DECIDE TO WITHHOLD YOUR RENT OR TAKE ANY OTHER LEGAL ACTION, IT IS ADVISABLE THAT YOU CONSULT AN ATTORNEY. IF YOU CANNOT AFFORD TO CONSULT AN ATTORNEY, YOU SHOULD CONTACT THE NEAREST LEGAL SERVICES OFFICE WHICH IS:

(NAME)

(TELEPHONE NUMBER)

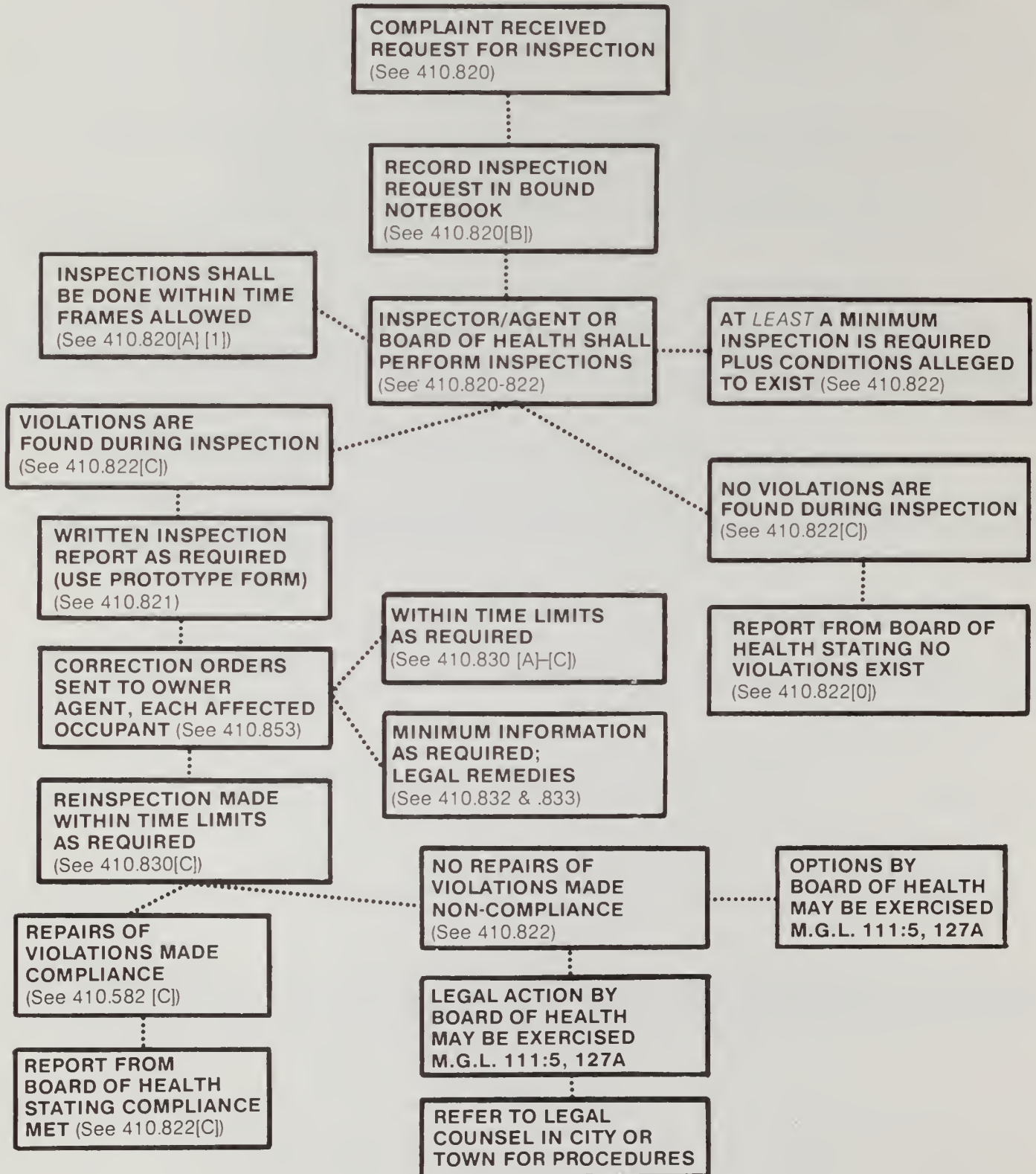
(ADDRESS)

APPENDIX II (14)

FLOW CHART FOR HOUSING INSPECTIONS

Derived from State Sanitary Code, Chapter II 105 CMR 410.000

Minimum Standards of Fitness for Human Habitation



APPENDIX II (14)

SAMPLE ORDER

FOR CORRECTION OF VIOLATIONS OF THE SANITARY CODE

Town of _____

Office of the Board of Health

Dear Sir:

The premises at _____ according to the records of the Town of _____ are owned by you. An inspection by an authorized representative of our Health Department was made on _____. This inspection reveals violations of 105 CMR _____, Chapter _____ of the Sanitary Code of the Department of Public Health of the Commonwealth of Massachusetts.

These violations and the sections of the Code violated are:

Under the terms of the State Sanitary Code, you are required to correct these violations. We ask your cooperation in doing so. A reinspection of your premises will be made in _____ days. If you desire further information or assistance, please do not hesitate to call our Code Enforcement Inspector, between 8:30 and 9:30 A.M. or 4:30 and 5:00 P.M.

You also may request a hearing and it is your responsibility to request same by filing the attached form with the board of health within 7 days.

If the violations are corrected and you wish an earlier reinspection, please contact us.

Thank you for your cooperation.

Very truly yours,

Board of Health

APPENDIX II (14)

SUBJECT: **Prototype Letter
Re: Housing Violation
Correction Orders**

Revised : February 13, 1980

BOARD OF HEALTH

Dear (Owner)

In accordance with Chapter 111, Sections 127A and 127B, of the Massachusetts General Laws, 105 CMR 400.000: State Sanitary Code, Chapter I: General Administrative Procedures, and 105 CMR 410.000: State Sanitary Code, Chapter II: Minimum Standards of Fitness for Human Habitation, an inspection was made of a(n) dwelling (unit/apartment) occupied by (occupant) at (address) by (inspector/title) on (date).

ORDERS OF THE BOARD

Section I. You are hereby ordered to correct the following violations within twenty-four (24) hours of receipt of this order.

* Use additional sheet if necessary

Regulation #	Violation Description
410._____	
410._____	
410._____	

Section II. You are hereby ordered to correct the following violations within fourteen (14) days of receipt of this order (see 410.830).

* Use additional sheet if necessary

Regulation #	Violation Description
410._____	
410._____	
410._____	

Section III. You are hereby ordered to correct the following violations within thirty (30) days (or any lesser time as determined by the board) of receipt of this order (see 410.830).

* Use additional sheet if necessary

Regulation #	Violation Description
410._____	
410._____	
410._____	

You are further ordered to begin all repairs of violations listed in Sections II and III within five (5) days of receipt of this letter or to contract in writing with a third party for the repairs to be made within five (5) days of receipt of this letter and to make a good faith effort to substantially correct all violations within the allotted time.

One or more of the above violations are such that they may endanger or materially impair the health, safety or well-being of the occupants.

Should you be aggrieved by this order, you have the right to request a hearing before the Board of Health. A request for said hearing must be received in writing in the office of the Board of Health within seven (7) days of receipt of this order. At said hearing you will be given an opportunity to be heard and to present witness and documentary evidence as to why this order should be modified or withdrawn. You may be represented by an attorney. Please also be informed that you have the right to inspect and obtain copies of all relevant inspection or investigation reports, orders, notices and other documentary information in the possession of this Board, and that any adverse party has the right to be present at the hearing.

Please be advised that the conditions noted may enable the occupants to use one or more of the statutory remedies available to them as outlined in the enclosed inspection report form.

Sincerely,

_____ Board of Health

_____ Chairman

_____ Member

_____ Member

To the Board: In accordance with Chapter 111, Section 127A, a statement of determination by the inspector should be included in the body of the order as to whether "violations were substantially caused by the occupants".

APPENDIX II (14)

EXAMPLE OF A PETITION FOR RENT RECEIVER

COMMONWEALTH OF MASSACHUSETTS

BERKSHIRE, SS:

DISTRICT COURT DEPARTMENT
CENTRAL BERKSHIRE DIVISION
CIVIL ACTION NO.

CITY OF PITTSFIELD)
)
)
VS.)
)
)
JOHN DOE)

PETITION FOR RENT RECEIVER

1. The Plaintiff is a municipal corporation under the laws of the Commonwealth of Massachusetts having a usual place of business in Pittsfield, Berkshire County, Massachusetts.

2. The Defendant is a resident of Pittsfield, Berkshire County, Massachusetts.

3. The Defendant is the present owner of rental property located at () Avenue in said Pittsfield.

4. The Defendant has been duly notified by the Health Department of the City of Pittsfield of violations of the State Sanitary Code Article II, Sections 5.1; 6.1; 9.3 and 13.1 in the rental unit at () Avenue.

5. The tenants have for several months withheld rents in the amount of \$760.00 pursuant to Section 8A of Chapter 239 of the Massachusetts General Laws as the result of these violations.

6. As the result of this rent withholding the Defendant is without income to pay the mortgage or to undertake the necessary repairs to this structure.

WHEREFORE the Plaintiff demands:

1. That pursuant to Chapter 111, Sections 127C through 127H a receiver for the rents due on this property be appointed.

2. That this Court order the tenants to pay all rents in the future and all arrearages to said receiver.

3. That said receiver be instructed to apply said rents toward the mortgage payments, fuel bills and the necessary repairs as ordered by the Health Department of the City of Pittsfield.

CITY OF PITTSFIELD

BY _____
ITS ATTORNEY
ASSOCIATE CITY SOLICITOR
CITY OF PITTSFIELD
PITTSFIELD, MA 01201

This report is authorized by law (Public Health Service Act, 42 USC 241). While your response is voluntary, your cooperation is necessary for the understanding and control of the disease.

INVESTIGATION OF A FOODBORNE OUTBREAK

1. Where did the outbreak occur?		2. Date of outbreak: (Date of onset 1st case)
State _____ (1,2) City or Town _____ County _____		_____ (3-8)
3. Indicate actual (a) or estimated (e) numbers:	4. History of Exposed Persons:	5. Incubation period (hours):
Persons exposed _____ (9-11)	No. histories obtained _____ (18-20)	Shortest _____ (40-42) Longest _____ (43-45)
Persons ill _____ (12-14)	No. persons with symptoms _____ (21-23)	Approx. for majority _____ (46-48)
Hospitalized _____ (15-16)	Nausea _____ (24-26) Diarrhea _____ (33-35)	
Fatal cases _____ (17)	Vomiting _____ (27-29) Fever _____ (36-38)	6. Duration of illness (hours):
	Cramps _____ (30-32) Other, specify _____	Shortest _____ (49-51) Longest _____ (52-54)
	_____ (39)	Approx. for majority _____ (55-57)

[illegible]

(a) Food Industry (61)

Raw ☐ 1

Processed ☐ 2

Home Produced

Raw ☐ 3

Processed ☐ 4

(b) Vending Machine ☐ 1 (62)

(c) Not wrapped ☐ 1 (63)

Ordinary Wrapping ☐ 2

Canned ☐ 3

Canned-Vacuum Sealed ☐ 4

Other (specify) ☐ 5

(d) Room Temperature ☐ 1 (64)

Refrigerated ☐ 2

Frozen ☐ 3

Heated ☐ 4

Restaurant	<input type="checkbox"/> 1
Delicatessen	<input type="checkbox"/> 2
Cafeteria	<input type="checkbox"/> 3
Private Home	<input type="checkbox"/> 4
Caterer	<input type="checkbox"/> 5
Institution:	
School	<input type="checkbox"/> 6
Church	<input type="checkbox"/> 7
Camp	<input type="checkbox"/> 8
Other, specify	<input type="checkbox"/> 9

Restaurant	<input type="checkbox"/>	1
Delicatessen	<input type="checkbox"/>	2
Cafeteria	<input type="checkbox"/>	3
Private Home	<input type="checkbox"/>	4
Picnic	<input type="checkbox"/>	5
Institution:		
School	<input type="checkbox"/>	6
Church	<input type="checkbox"/>	7
Camp	<input type="checkbox"/>	8
Other, specify	<input type="checkbox"/>	9

If a commercial product, indicate brand name and lot number

11.45.

APPENDIX II (15)

APPLICATION FOR REGISTRATION by RETAIL FOOD ESTABLISHMENT

In accordance with the provisions of the Regulation promulgated under authority of Section 305-A of Chapter 94 of the General Laws of the Commonwealth of Massachusetts application for Registration is hereby made by:

(Print or type)

FIRM NAME _____

FIRM ADDRESS _____

Street

City or town

Zip Code

STORE ADDRESS _____

Street

City or town

Zip Code

(each store must be Registered individually)

Type of Business

(check one)

_____ CORPORATION _____ PARTNERSHIP _____ SOLE OWNER

Date of Application _____ City or Town where filed _____

Name of Corporate Officers: (to be signed by each)

President: _____

Name

Address

Treasurer: _____

Name

Address

Clerk: _____

Name

Address

Name of Partners: (to be signed by each)

Name _____ Address _____

Name _____ Address _____

Name of Sole Owner: (to be signed)

Name _____ Address _____

Person Preparing Application _____

Title _____

STORE SELLS: _____ Meat _____ Produce _____ Dry Groceries _____ Dairy _____ Frozen Foods

ORIGINAL FOR LOCAL DEPARTMENT OF HEALTH
COPY FOR STATE DEPARTMENT OF PUBLIC HEALTH

APPENDIX II (15)

RETAIL FOOD ESTABLISHMENT CERTIFICATE OF REGISTRATION (must be posted in retail establishment)

NAME OF FIRM _____

LOCATION OF FIRM _____
Street City or town Zip Code

STORE ADDRESS _____
Street City or town Zip Code

REGISTERED UNDER THE PROVISIONS OF SECTION 305A, CHAPTER 94 OF THE
GENERAL LAWS

DATE OF REGISTRATION _____ EXPIRATION DATE _____

Registration shall not be transferred, assigned, or conveyed. No Retail Food
Establishment shall process, prepare for sale, or sell, any food product
unless Registered.

Issued by _____

City or town _____

Title _____

Date of Inspection: Agent: Date of Temporary Revocation: Date Reinstated:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

THE COMMONWEALTH OF MASSACHUSETTS

No. of 19

APPLICATION FOR PERMIT TO OPERATE A FOOD SERVICE ESTABLISHMENT

To the Board of Health of:
Application is made for a Permit to operate a Food Service Establishment in accordance with the provisions of
Chapter 94, Section 305A and Chapter 111, Section 5 of the General Laws: —

Full Name of Applicant

Type of Establishment

Business Address

If applicant is a partnership, full name and residence of all partners

If Applicant is a Corporation

State of Incorporation

Full Name and Address of:

PRESIDENT

TREASURER

CLERK

Signature

City or Town



APPENDIX II (15)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF FOOD AND DRUGS
BOSTON 33, MASSACHUSETTS

BOARD OF HEALTH

INSPECTION REPORT
FOOD SERVICE ESTABLISHMENTS

TOWN _____
CITY OF: _____

CITY, COUNTY OR DISTRICT _____ NAME OF ESTABLISHMENT _____ ADDRESS _____ OWNER OR OPERATOR _____

TYPE OF ESTABLISHMENT: RESTAURANT () CATERER () MOBILE CANTEN () COMMISSARY () OTHER () _____

FOOD SUPPLIES		Specify:	Bakery products	Poultry and poultry products	Meat and meat products	Frozen desserts	Shellfish	Milk and milk products	Satisfactory	Unsatisfactory	SANITARY DESIGN CONSTRUCTION AND INSTALLATION OF EQUIPMENT AND UTENSILS		Good repair, no cracks	No chips, pits or open seams	Cleanable, smooth	Approved material	No corrosion	Proper construction	Accessible for cleaning and inspection	Satisfactory	Unsatisfactory
Approved source											Food-contact surfaces of equipment										
Wholesome - not adulterated											Utensils										
Not misbranded											Non-food-contact surfaces of equipment										
Original container, properly identified											Single-service articles of non-toxic materials										
Approved dispenser											Equipment properly installed										
Fluid milk and fluid milk products pasteurized											Existing equipment capable of being cleaned, non-toxic, properly installed, and in good repair										
Low-acid and non-acid foods commercially canned																					
FOOD PROTECTION		Preparation	Storage	Display	Service	Transportation	CLEANLINESS OF EQUIPMENT AND UTENSILS														
Protected from contamination							Tableware clean to sight and touch														
Adequate facilities for maintaining food at hot or cold temperatures							Kitchenware and food contact surfaces of equipment clean to sight and touch														
Suitable thermometers properly located							Grills and similar cooking devices cleaned daily														
Perishable food at proper temperature							Non-food-contact surfaces of equipment kept clean														
Potentially hazardous food at 45°F. or below, or 150°F. or above as required							Clean wiping cloths used; use properly restricted														
Frozen food kept frozen; properly thawed							Tableware sanitized														
Handling of food minimized by use of suitable utensils							Utensils and equipment pre-rinsed, scraped or soaked														
Fruits and vegetables washed thoroughly							Kitchenware and food-contact surfaces of equipment used for potentially hazardous food sanitized														
Food cooked to proper temperature							Detergents and abrasives rinsed off food-contact surfaces														
Unwrapped and potentially hazardous food not re-served							Facilities for washing and sanitizing equipment and utensils approved, adequate, properly constructed, maintained and operated														
Poisonous and toxic materials properly identified, colored, stored and used; poisonous poisons not present							Wash and sanitizing water clean														
Bactericides, cleaning and other compounds properly stored and non-toxic in use dilutions							Wash water at proper temperature														
HEALTH AND DISEASE CONTROL							Dish tables and drain boards provided, properly located and constructed														
Persons with boils, infected wounds, respiratory infections or other communicable disease properly restricted							Adequate and suitable detergents used														
Known or suspected communicable disease cases reported to health authority							Approved thermometers provided and used														
CLEANLINESS							Cleaned and sanitized utensils and equipment properly stored and handled; utensils air-dried														
Hands washed and clean							Suitable facilities and areas provided for storing utensils and equipment														
Clean outer garments; proper hair restraints used							Single-service articles properly stored, dispensed and handled														
Good hygienic practices							Single-service articles used only once														
WATER SUPPLY							Single-service articles used when approved washing and sanitizing facilities are not provided														
From approved source; adequate; safe quality																					
Hot and cold running water provided																					
Transported water handled, stored, dispensed in a sanitary manner																					
Ice from approved source; made from potable water																					
Ice machines and facilities properly located, installed and maintained																					
Ice and ice handling utensils properly handled and stored; black ice rinsed																					

SEWAGE DISPOSAL	Sat.	Unsat.	FLOORS, WALLS AND CEILINGS	Sat.	Unsat.
Into public sewer, or approved private facilities			Floors kept clean; no sawdust used		
PLUMBING			Floors easily cleanable construction, in good repair, smooth, non-absorbent		
Property sized, installed and maintained			Floor graded and floor drains, as required		
No cross connections			Exterior walking and driving surfaces clean; drained		
No back siphonage possible			Mats and duck boards cleanable, removable and clean		
Equipment properly drained			Floors and wall junctures properly constructed		
TOILET FACILITIES			Walls, ceilings and attached equipment clean		
Adequate, conveniently located, and accessible; properly designed and installed			Walls and ceilings properly constructed and in good repair; coverings properly attached		
Toilet rooms, fixtures and vestibules kept clean, in good repair, and free from odors			Walls of light color; washable to level of splash		
Toilet rooms completely enclosed, and equipped with self-closing, tight-fitting doors; doors kept closed			LIGHTING		
Toilet tissue and proper waste receptacles provided; waste receptacles emptied as necessary			20 foot-candles of light on working surfaces		
HAND-WASHING FACILITIES			15 foot-candles of light on food equipment, utensil-washing; hand-washing areas and toilet rooms		
Lavatories provided, adequate, properly located and installed			VENTILATION		
Provided with hot and cold or tempered running water through proper fixtures			Rooms reasonably free from steam, condensation, smoke, etc.		
Suitable hand cleanser and sanitary towels or approved hand-drying devices provided			Rooms and equipment vented to outside as required		
Waste receptacles provided for disposable towels			Hoods properly designed; filters removable		
Lavatory facilities clean and in good repair			Intake air ducts properly designed and maintained		
GARBAGE AND RUBBISH DISPOSAL			Systems comply with fire prevention requirements; no nuisance created		
Stored in approved containers; adequate in number			DRESSING ROOMS AND LOCKERS		
Containers cleaned when empty; brushes provided			Dressing rooms or areas as required; properly located		
When not in continuous use, covered with tight fitting lids, or in protective storage inaccessible to vermin			Adequate lockers or other suitable facilities		
Storage areas adequate; clean; no nuisances; proper facilities provided			Dressing rooms, areas and lockers kept clean		
Disposed of in an approved manner, at an approved frequency			HOUSEKEEPING		
Garbage rooms or enclosures properly constructed; outside storage at proper height above ground or on concrete slab			Establishment and property clean, and free of litter		
Food waste grinders and incinerators properly installed, constructed and operated; incinerators, incinerator areas clean			No operations in living or sleeping quarters		
VERMIN CONTROL			Floors and walls cleaned after closing or between meals by dustless methods		
Presence of rodents, flies, roaches and vermin minimized			Laundered clothes and napkins stored in clean place		
Outer openings protected against flying insects as required; rodent-proofed			Solded linen and clothing stored in proper containers		
Harborage and feeding of vermin prevented			No live birds or animals other than guide dogs		

REMARKS _____

Date _____ Health Authority _____

Person in Charge _____

APPENDIX II (15)

EXAMPLE OF REMINDER/EDUCATIONAL NOTICE

TO: ALL MOBILE FOOD VENDORS

FROM:

SUBJECT: RULES AND REGULATIONS FOR PROPER FOOD HANDLING

The number of mobile food vendors now holding permits in Amherst prompts us to emphasize the following rules which must be complied with and which are essential if mobile food vendors are going to continue to be allowed to operate in Amherst:

1. Safe temperature for perishable foods is below 45°F or above 150°F.
2. Hands must be kept clean (suggest use of disposable towelettes or similar suitable cleaning device).
3. Effective hair restraints must be used.
4. All food products must be effectively protected (covered). All utensils (knives, etc.) must be properly stored and kept clean.
5. Disposable dishware (cups, spoons, plates, etc.) must be properly stored. (Not on ground; covered and away from animals.)
6. All food contact surfaces (cutting boards, etc.) must be kept clean and sanitized at frequent intervals to avoid attracting insects or other contaminating materials.
7. Provision must be made for storage and disposal of litter and refuse.

Your cooperation in all of the above areas will be expected. Frequent inspections of your operation will be conducted by members of our staff.

APPENDIX II (16)

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

Western Regional Office

Recreational Camp Inspection Form

Camp Name:

Street:

Mailing Address:

Town:

Phone:

Director:

Licensee:

Date:

Capacity:

(X = Violation ✓ = Compliance)

Site Location: Traffic () Safety () Drainage ()

Remarks:

Housing:		1	2	3	4	5
1. Kitchen	Structurally Safe	()	()	()	()	()
2. Dorm/Cabins	Weathertight	()	()	()	()	()
3. Dining Hall	Screening	()	()	()	()	()
4. Infirmary	Exits	()	()	()	()	()
5. Toilets/showers	Cleanliness	()	()	()	()	()
	Lighting	()	()	()	()	()
	Certificate of Occupancy			Yes ()		No ()

Date

Remarks:

Bedding and Sleeping Facilities	Beds	()	(3 apart)	Heads 6 apart ()
	Bunks	()	(4.5 apart)	
	Area	()	40 sq. ft./camper	
	Linens, etc.	()	Adequate/Laundered weekly	

Remarks:

Food Service: (See Article X)

		Remarks
Design and Layout	()	
Wholesomeness/Food	()	
Protection/Food	()	
Equip. Clean/Functional	()	
Refrigeration/Adequate	()	
Dishwashing/Adequate	()	
Licensed by BOH	()	

Water Supply: Public ()

Well () Driven () Drilled () Dug ()

Construction: Cover ()

Curbing ()

No Cross Connection ()

Samples: Chem. () Date:

Bact. () Date:

Drinking Fountains () Number:
(Approved)

Remarks:

Toilet Facilities: Males () Females ()

2/30 + 1 urinal 1/10

Condition () Sanitized Daily ()

Approved Location () Distance to Sleep Area:

Remarks:

Lavatories/Showers:

Lavatories:

Showers:

1/10 ()

1/20 ()

Approved Location ()

()

Condition/Sanitized Daily ()

()

Remarks:

Sewage Disposal: Type: () Public – Septic Tank, etc.

Comply Title 5 ()

Sanitary/No Surface Disposal ()

Remarks:

Refuse: Disposal and Storage () Approved Landfill ()
Frequency () Location/Storage ()
(2 days max.)
Containers/Adequate () Covered ()

Remarks:

Vermin: Control ()
Approved Methods ()

Remarks:

Swimming Area: Natural () Safe ()
Pool () See Title II Comply ()
Bact. Sample () Date:
Lifeguard WSI () ALS ()

Remarks:

Safety and Fire Prevention:

Playground and Equipment/Safe () Fire Equip./Smoke Detectors ()
Chemicals and Pesticides/Storage () Locked/Separate ()

Medical/Nursing:

Physician ()	Log/Bound Book ()
(Written Agreement)	Dispense/Meds ()
(Standing Orders)	First Aid/Equip. ()
Nurse ()	TB/Staff ()
Telephone/Available ()	Medical History/Staff ()
Isolation Unit ()	Medical History/Campers ()
	Physical Exam/Campers ()

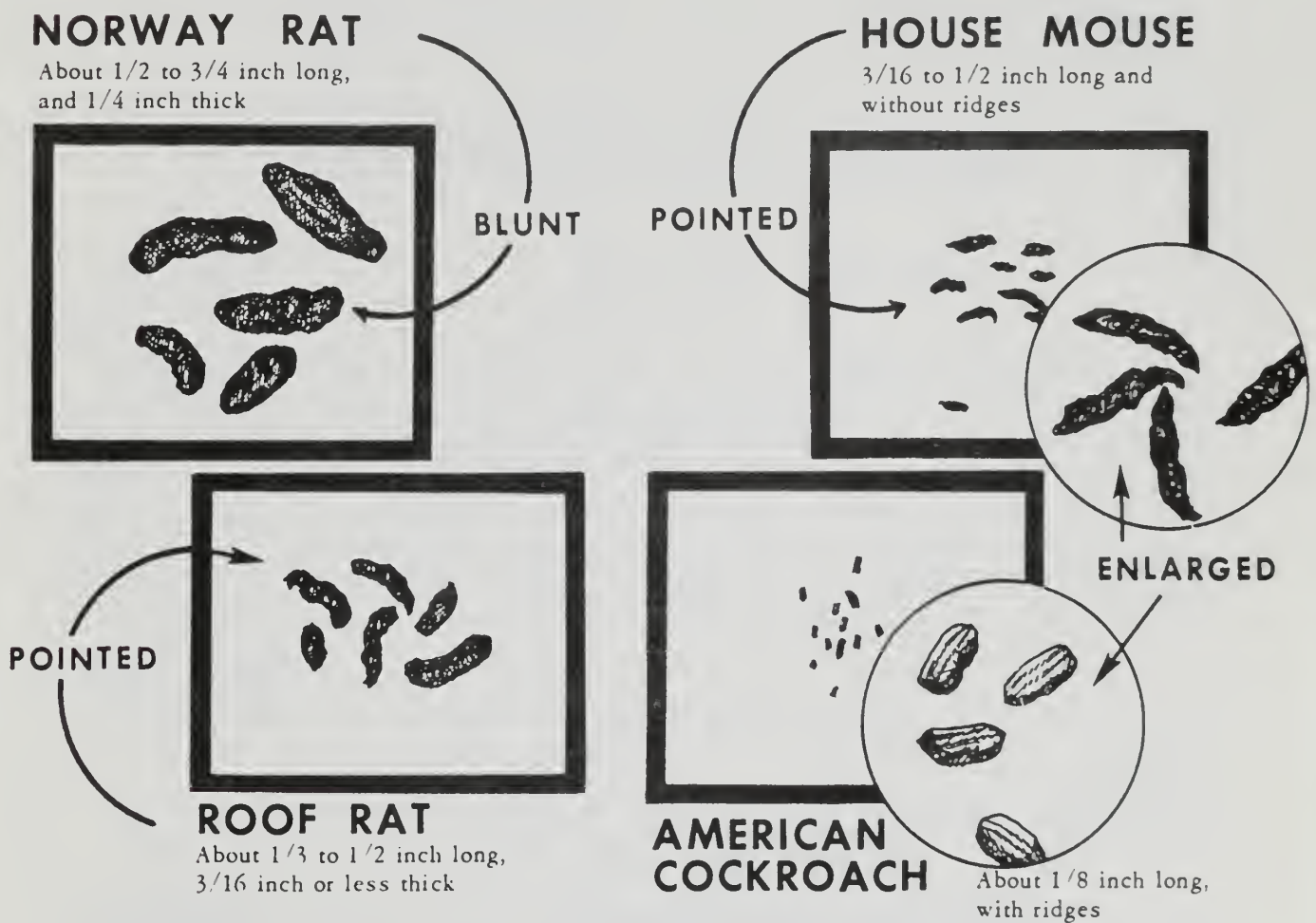
Remarks:

APPENDIX II (17)

IDENTIFICATION OF RATS*

The most common species of rats found in New England are the brown Norway rat and the black grey roof rat.

Signs of rat infestation are usually found in secluded places along walls, under rubbish piles, and behind or under boxes, boards and thick plant growth. Droppings (see diagram), cleared paths or runways, greasy rubmarks along runways, gnawings, and tracks are all indications that rats are present. All such signs are readily visible on careful inspection. A light held at an angle is especially useful in identifying tracks.

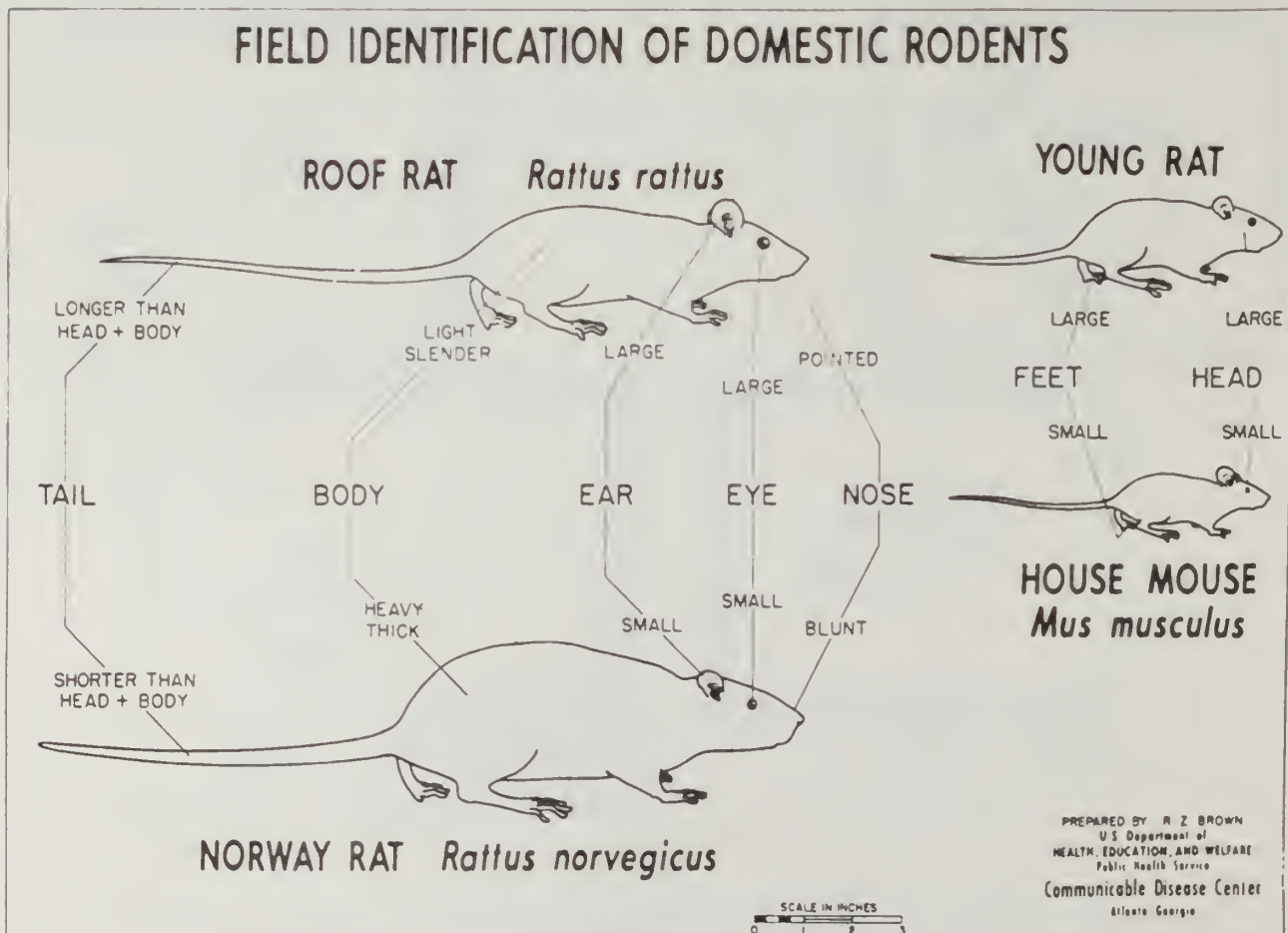


* Bjornson, B. F., Pratt, H. D., Lettig, K. S. Training Guide — Rodent Control Series. U.S. Department of Health, Education and Welfare. Bureau of Community Environmental Management.

APPENDIX II (17)

RAT CONTROL PROTOCOL - HOUSING

Reason for Action	Action
1. You receive a complaint that rats have been seen near a house or public building.	The presence of rats is always a health hazard. You do an inspection, looking for signs of rats and their source of food.
2. Rubmarks, droppings, etc. tell you that rats are present. You find the food source that is attracting them.	You advise the people responsible for the presence of rats of your findings. You tell them that they must first have the rats exterminated and then remove the food source and their nesting places.
3. The people fail to follow your suggestions. Rats are still a problem.	You issue an order to have the rat problem cleared up.



APPENDIX II(17)

BAT CONTROL

The recent isolation (1980) in Massachusetts of rabies virus from seven of 132 bats (5.3 percent) indicates that special attention must be paid to bat control.

The following figures from the State Diagnostic Laboratories illustrate that in Massachusetts bats present the most significant rabies problem.* Other rabid animals were a raccoon, a skunk and a cat.

Cases of Rabies Occurring in Bats in Massachusetts, 1971-1980.

Year	Rabies in Animals no.	Rabies in Bats no.
1971	6	6
1972	6	6
1973	6	5
1974	4	4
1975	12	11
1976	26	26
1977	10	10
1978	7	7
1979	9	9
1980	8	7

Bat Extermination

The physical blocking of entrance holes is the most effective means of getting rid of bats. Wire screening, wood, or fiberglass insulation are commonly used to seal entrances. When practical, it is best to close the holes at night while bats are away from the roost area; this minimizes the risk of exposure of the individual and avoids the problem of trapping bats in the roost. Entrance holes are best found by observing bats emerging from roosts at dusk. Where it is impractical to block access to roost sites, chemical repellants have been tried with varying degrees of success. Fiberglass insulation has been found to be an effective physical repellent, if it can be placed where bats are roosting. If non-violent methods of control are unsuccessful or impractical, ROZOL, a new pesticide, may be considered, but only where there is documented presence of rabies in the colony of bats and/or a high risk of potential contact between bats and man or domestic animals.

Procedure for Handling Bat Problems

1. An inspection should be made by the local board of health. Assistance and/or advice should be obtained from the District Health Officer.
2. Captured or dead bats should be placed in a coffee can or similar container which has a snugly fitting plastic lid, and taken to the State Laboratory Institute at Jamaica Plain (specimens will be accepted 7 days a week), to determine whether the animal is rabid.
3. A new pesticide called Rozol has been developed and approved for use in Massachusetts for the control of bats. It is a highly toxic substance and must be applied by a certified pest control operator. Assistance may be obtained from Lew Wells of the Mass. Pesticide Board at (617) 727-2863.
4. Information regarding the management of persons bitten by bats may be obtained 24 hours a day by telephoning the State Laboratory Institute at (617) 522-3700.

* Rabies Center for Disease Control, U.S. Department of Health, Education and Welfare, Public Health Service Atlanta September 1978.

APPENDIX II(18)

EXAMPLE OF LOCAL REGULATION

TOWN

SEAL

BOARD OF HEALTH NOTICE

The Board of Health, Town of _____, Massachusetts in accordance with, and under the authority granted by Sections 31 A and 31 B of Chapter 111 of the General Laws of the Commonwealth of Massachusetts hereby adopted the following rules and regulations at a meeting of the Board held on September 17, 1979.

All other regulations of the Board of Health inconsistent with these regulations are repealed as of October 15, 1979.

Effective date: These regulations shall take effect on _____.

DUMPSTER REGULATIONS AND FOR THE REMOVAL AND TRANSPORTATION OF GARBAGE, RUBBISH, OFFAL OR OTHER OFFENSIVE SUBSTANCES.

1. Each dumpster must be located at a distance from the lot line as not to interfere with the safety, convenience or health of abutters or residents. Dumpster location must be approved by the Board of Health.
2. When deemed necessary by the Board of Health, it may be required that a dumpster site be enclosed or screened by the property owner or authorized agent.
3. Dumpster is not to be filled between the hours of 11:00 p.m. and 7:00 a.m. for residential property and at the close of the business day for commercial property, at which time the lids are to be locked. The lids must be closed when dumpster is not in use during all other times.
4. Each dumpster must be of sufficient size and capacity to eliminate overflowing, and the property owner or authorized agent of the premises utilizing the service must take appropriate action immediately to empty contents when full.
5. Each dumpster must be situated so as not to obstruct the view of flowing traffic.
6. It shall be the responsibility of the property owner or agent being serviced to maintain the dumpster area free of odors, scattered debris, overflowing, and all other nuisances.
7. The property owner or authorized agent responsible for maintaining the dumpster service is required to have a permit from the Board of Health for each dumpster. All permits shall expire at the end of the calendar year in which they are issued, but may be renewed annually on application as herein provided. There shall be a fee of \$10.00 for each dumpster payable yearly for said permit.

8. No contractor, firm or person shall supply a dumpster service in the Town of _____, for the purpose of storage, removal or transporting of garbage, rubbish, offal or other offensive substances without first obtaining a permit from the Board of Health. All permits shall expire at the end of the calendar year in which they are issued, but may be renewed annually on application as herein provided. There shall be a fee of \$10.00 payable for said permit.
9. Temporary dumpster permits (roll-off or gondola type) will be issued to a property owner or authorized agent for a period of time not to exceed 30 days, in connection with construction, demolition, fairs, carnivals or for other similar temporary needs. Said permit may be renewed for additional 30 days upon application. The property owner or authorized agent shall comply with all the provisions of these regulations which are applicable to the operation of the dumpster. There shall be a fee of \$5.00 payable for each temporary dumpster permit.
10. The contractor shall have his/her name and business telephone number conspicuously displayed on the dumpster.
11. The emptying of the dumpster contents by the contractor shall not commence before 7:00 a.m. and not continue after 11:00 p.m.
12. The dumpster contractor shall have the dumpster deodorized when emptied or if necessary, washed or sanitized as directed by order of the Board of Health.
13. These regulations apply to all dumpsters in the Town of _____ whether for residential, commercial or industrial use.
14. Permits may be suspended or revoked by the Board of Health for failure of the dumpster contractor or the property owner/his authorized agent to comply with the requirements of these regulations.

By the Board of Health

APPENDIX II (18)

EXAMPLE OF LOCAL PERMIT

APPLICATION FOR DUMPSTER PERMIT

(Pursuant to Section 31A, Chapter 111 of the
General Laws, and Rules and Regulations
of the _____ Board of Health)

Date _____

Print in ink
or type

TO BOARD OF HEALTH,

Application is hereby made for a permit to maintain a dumpster on property, as listed below, in accordance with the Rules and Regulations of the Board of Health.

Check whether permit is for:

() Residential use () Commercial use () 30 day temporary () 1 year

Name and residence of:

Owner of property

Tel. No.

Applicant for dumpster permit

On bottom half of this form, please sketch an outline of property, showing thereon the proposed location of dumpster. Give distance from dumpster to other buildings and lot lines or boundaries. Use back side of this application if additional space is needed.

Return this application with fee of \$10.00 to: Board of Health, Town Hall.

EXAMPLE OF LOCAL PERMIT

APPLICATION FOR PERMIT TO OPERATE DUMPSTER SERVICE, ETC.

(Pursuant to Section 31A, Chapter 111 of the
General Laws, and Rules and Regulations
of the _____ Board of Health)

Date _____

Print in ink
or type

TO BOARD OF HEALTH:

Application is hereby made for a permit to operate a **DUMPSTER SERVICE** and for the **REMOVAL OR TRANSPORTATION OF GARBAGE, RUBBISH, OFFAL OR OTHER OFFENSIVE SUBSTANCES** in the Town of _____, in accordance with Section 31A, Chapter 111 of the General Laws of the Commonwealth of Massachusetts and the Rules and Regulations of the Board of Health.

Check whether applicant is:

() Individual () Corporation () Partnership () Other

Print complete name of organization _____

Address of main office

Tel. No.

Names of partners or officers of organization:

Name	Title	Address	Tel. No.
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Name	Title	Address	Tel. No.
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Name	Title	Address	Tel. No.
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Signature of applicant or authorized officer

Address

Please list, on the attached form, the names and addresses of locations (residential or commercial) that are serviced by you in _____:

Return this application and attached form with fee of \$10.00 to: Board of Health.

APPENDIX II(21)

MISCELLANEOUS IMMUNIZATION MATERIALS

I. **Metropolitan Life Insurance Company**

Items: Posters (15" X 18"), Immunization Record Card, Memo to Parents About Immunization (26-page pamphlet), news release on immunization

Cost: Free (in limited quantities)

Available From: Local Metropolitan Offices or write:
Health and Safety Education Division
Metropolitan Life Insurance Company
One Madison Avenue
New York, NY 10010

II. **Council on Family Health**

Item: Poster (17" X 22" or 8½" X 11", black and white)

Cost: 25 @ \$10.40, 50 @ \$19.40, 100 @ 36.40
(large size; small size prices to be determined)

Available From: Council on Family Health (Poster)
633 Third Avenue
New York, NY 10017
212-421-1090
Mr. Jim Lichtenberg

(Make checks payable to Council on Family Health)

III. **Channing L. Bete Co., Inc.**

Item: Pamphlet "Shots for Tots" explaining the importance of immunization, what it is, descriptions of seven vaccine-preventable diseases, recommended schedule and personal vaccination record space (16 pages).

Cost: \$.25 each for single copies, less for multiple copies (personalization available)

Available From: Channing L. Bete Co., Inc.
45 Federal Street
Greenfield, MA 01301

IV. **Blue Cross - Blue Shield**

BC-BS usually has state units develop excellent health education materials on immunization, including posters, pamphlets, TV and radio spots. They make them available at little or no charge for limited quantities. Your local office can tell you where to direct your request.

V. **Childhood Immunization Community Action Kit**

Available from: National League for Nursing
10 Columbus Circle
New York, NY 10019

Publication No.: 52-1717 (1978)

Cost: \$4.95 (20% discount on 10 or more copies; orders will be billed only for \$10 minimum orders)

Contents: (64 pages) The publication is designed to help state and local organizations develop and coordinate successful immunization campaigns. Although the book offers a detailed discussion of vaccine-preventable diseases and available vaccines, its primary focus is the organization and administration of effective immunization programs. The kit provides models and information for raising funds, recruiting volunteers, securing publicity and advertising, and locating information sources.

MISCELLANEOUS IMMUNIZATION MATERIALS

VI. National Public Awareness Materials (Lowengard and Brotherhood Contract)

There are five categories of materials produced under the mass media contract. The first is the TV spots, the second is the radio spots, the third is newspaper advertisements, the fourth is magazine advertisements and the last is the print materials — posters, transit cards, inside bus and subway cards, and station cards. The print materials were ordered through immunization projects from the Government Printing Office, while the remainder were distributed by Lowengard and Brotherhood, approximately May 1, 1978.

The basic themes of the materials are as follows:

1. My son Charlie got the measles. He was unlucky. Now he's deaf for life. Immunize your child. Please.
2. Give your child the chance for a whole, good life. Immunize him. Immunize her. Please.
3. There are 7 bad reasons to immunize your child. Measles, mumps, rubella, polio, diphtheria, tetanus, pertussis. Can you think of one good reason **not** to?
4. Love isn't the only reason to immunize your child. Send for our free brochure. It has lots of reasons. (Parents' Guide) *
5. If your child gets sick this year, and you could have prevented it, how will you say you're sorry? Immunize your child. Please.
6. Star Wars, with R2D2 and C3P0

* *Parent's Guide to Childhood Immunization*, available from: Immunization, Pueblo, CO 81009.